

# The Second Season of Excavations at Tepe Rahmat Abad, Southern Iran: The Absolute and Relative Chronology

Hossein AZIZI KHARANAGHI, Hassan FAZELI NASHLI and Yoshihiro NISHIAKI

## Abstract

*Fars province has full potential for those wishing to study the long term cultural developments from the Neolithic to the Chalcolithic in the land of Iran. Recent extensive excavations and surveys in the region have provided key information as to when such cultural transformation occurred, although much of the detail remains to be further elucidated. The second season of archaeological excavation at Rahmat Abad was carried out in 2009 with the main objective of refining the absolute and relative chronological sequence of the Neolithic and Chalcolithic occupations. As a result, Tepe Rahmat Abad yielded the first evidence for Pre-Pottery Neolithic occupations in the Fars province and therefore provided critical new insights into the spread of the Neolithic across the southern Zagros. In addition, the excavations revealed a long cultural sequence within the 9 m-deep cultural deposits, ranging from 1) the Islamic Qajar period (nineteenth century AD), 2) Achaemenian (fifth century BC), 3) Early-Middle Bakun (early to mid-fifth millennium BC), and 4) Pottery Neolithic (late seventh millennium BC) to 5) Pre-Pottery Neolithic (late eighth to early seventh millennium BC).\**

## Introduction

Tepe Rahmat Abad (E 053° 3'27.89", N 30° 6'43.50"; 1774 m asl) is located next to the village of the same name. It covers an area of just 0.5 ha and rises 5 m above the surrounding plain (Fig. 1). The mound sits at the edge of the fertile Kamin plain (Sādat Shahr) at the southerly end of the Bolaghi gorge. The Pulvar River runs 500 m to the east, and its bed cuts through the Bolaghi gorge, at the upper end of which lies Pasargadae, the royal capital of the founder of the Persian Empire, Cyrus the Great. The modern Esfahan-Shiraz highway runs to the south of the mound and major parts of the southern and western parts of the mound have been destroyed by road construction activities. Rural houses have encroached on the north and northeastern parts of the mound (Figs 2, 3).<sup>1</sup>

\* One of the authors (Hossein Azizi Kharanaghi) would like to thank the excavation team members (Aylar Abdolazadeh, Nastarn Moradi, Vadiid Barani, Morteza Khnipour, Hamid Karami and Farhd Zareh), who worked in a very hot summer under difficult conditions. His deep thanks also go to Dr Mohamad Hassan Talebian, director of the Parse-Pasargadae research centre, and Mohamad Nasiry, director of the Pasargadae Research Base, for their full support of the fieldwork. The authors wish to thank Helen Taylor and Lloyd Weeks for their very useful advice and comments.

<sup>1</sup> Azizi Kharanaghi 2009.

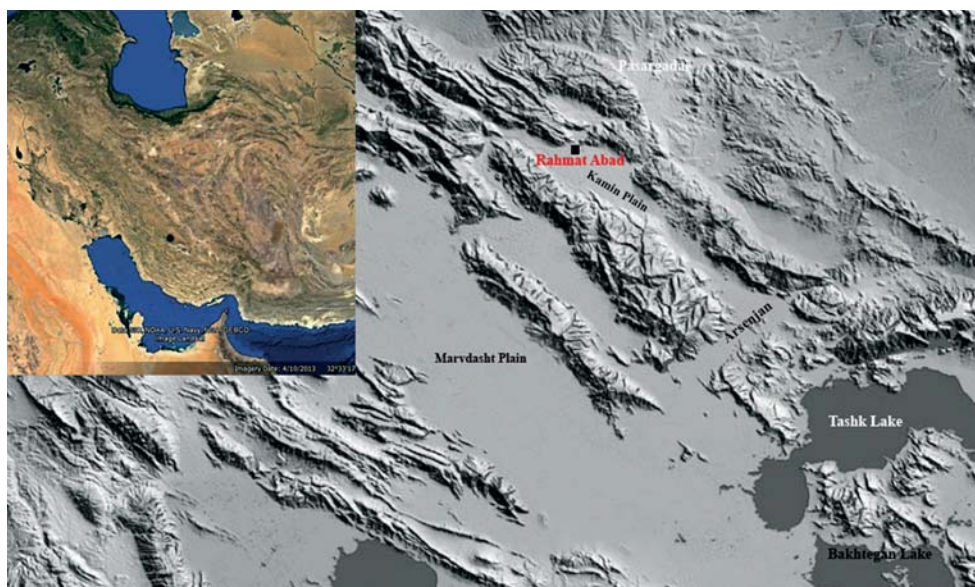


Fig. 1. Location of Tepe Rahmat Abad.

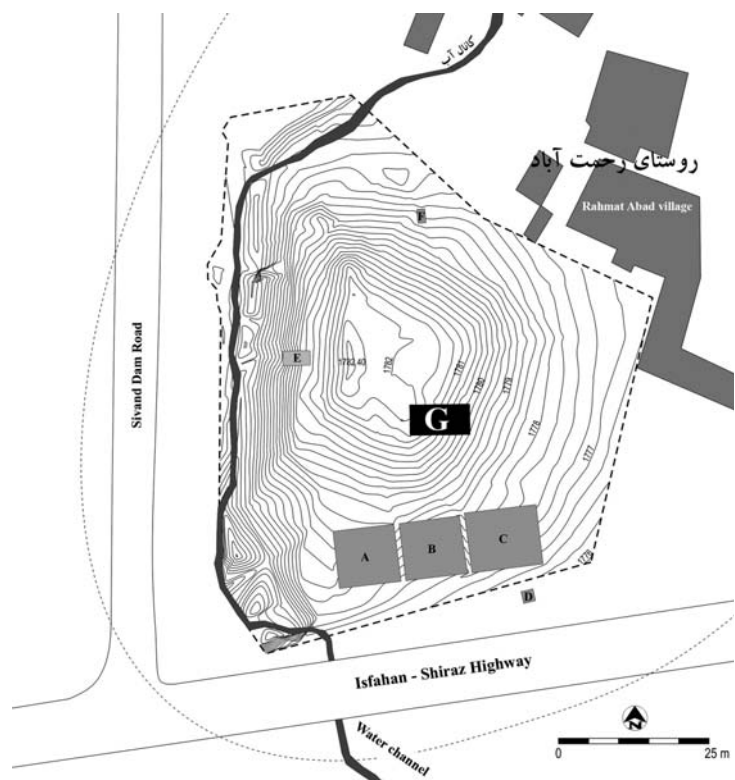


Fig. 2. Tepe Rahmat Abad topographical map, showing the location of trenches.



Fig. 3. Aerial photo of Tepe Rahmat Abad  
(photo: Mohamad Taghi Attayi, Research Archive of Parse-Pasargadae photo).

The first season of excavation at Rahmat Abad was carried out in the summer of 2005, at the same time as the Sivand Dam salvage excavation project. A joint team from the Institute of Archaeology, University of Tehran (Hassan Fazeli Nashli) and Binghamton University, New York (Susan Pollock and Reinhard Bernbeck) conducted the excavation.<sup>2</sup> In the first season three 10 × 10 m trenches (A, B and C) were opened in the southern part of the mound, close to the Esfahan-Shiraz highway. Three smaller 2 × 2 m trenches were also opened in the south (D), west (E) and north (F) of the mound, with the aim of clarifying the stratigraphy of the site (Fig. 2). In Trenches A, B and C, rich cultural layers primarily dating to the Middle Bakun sub-phase (contemporary with Tall-e Gap) were discovered. The 1 × 1 m test pit in the northeastern corner of these trenches revealed some evidence of pre-pottery occupations. In Trenches D and F, only Middle Bakun material was found and in Trench E historic (Achaemenian) and Middle Bakun layers were uncovered.<sup>3</sup>

<sup>2</sup> Bernbeck *et al.* 2005; Fazeli Nashli and Azizi Kharanaghi 2008.

<sup>3</sup> Fazeli Nashli *et al.* 2009.





Fig. 4. General views of Trench G.

Despite the large-scale excavations, the first season unfortunately did not reveal a coherent stratigraphic sequence for the site. Therefore, the main objective of the second season at Tepe Rahmat Abad was to establish the site's relative and absolute chronology. It is also important to note that radiocarbon dates from the first season attested the Pre-Pottery Neolithic of the site,<sup>4</sup> which encouraged us to excavate the site in two seasons. The second phase of excavation successfully yielded new results related to the Neolithic and Chalcolithic periods, making it possible to update the chronology of the Fars region. The important results were obtained from a new trench; that is, Trench G, opened at the highest point of the mound (Fig. 4). This trench yielded the longest sequence of the site within the 9 m of cultural deposits, from the Late Islamic period to the Pre-Pottery Neolithic phase.

### Methodology

The excavation was carried out using a single-context recording system and a Harris Matrix was constructed to determine the relationships between the different contexts (Fig. 5). The texture, size, thickness and dimensions of each context were recorded. In Trench G, 43 contexts were documented, numbering 7000 to 7042. A registry number (RN) system was also used to precisely record cultural data. In order to establish the exact location of any given find, the northeast corner of the trench was selected as a fixed point, and each find's horizontal position (X and Y) was measured from that point. The depth (Z) was recorded using a Dumpy level. Trench G was oriented east-west and located on the eastern slope close to the top of the mound. In order to obtain the maximum information with the minimum damage, this trench was excavated as a step trench (Figs 4, 6). Once each cultural period had been identified, excavation proceeded to a lower

<sup>4</sup> Bernbeck *et al.* 2008, p. 38.



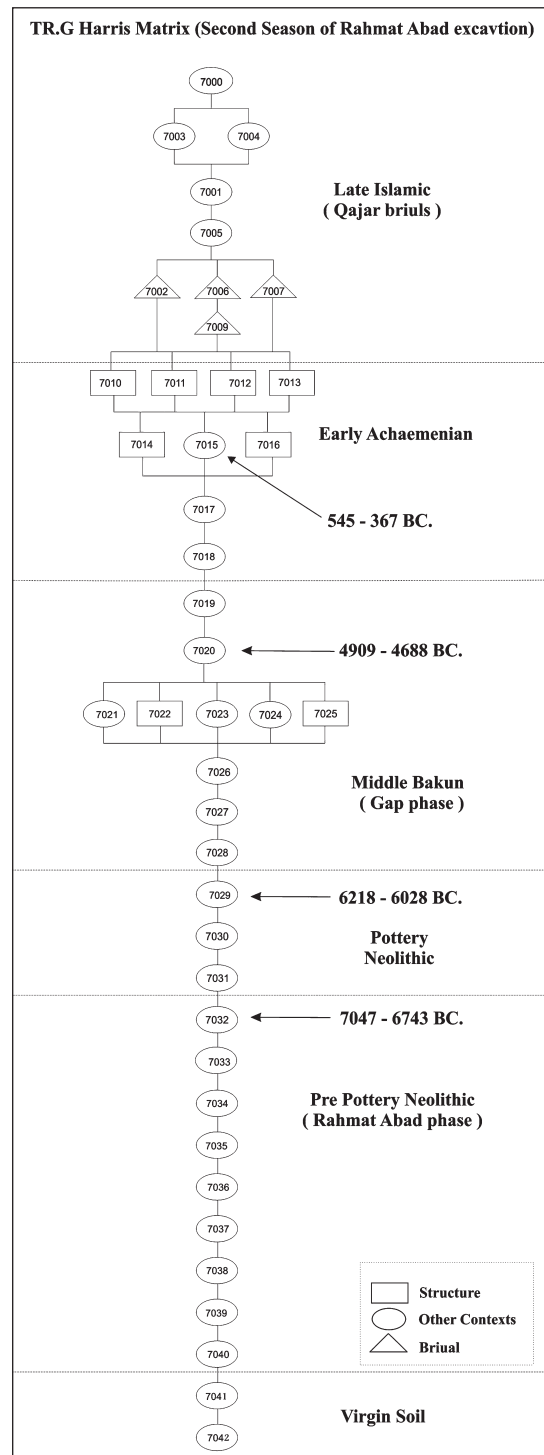
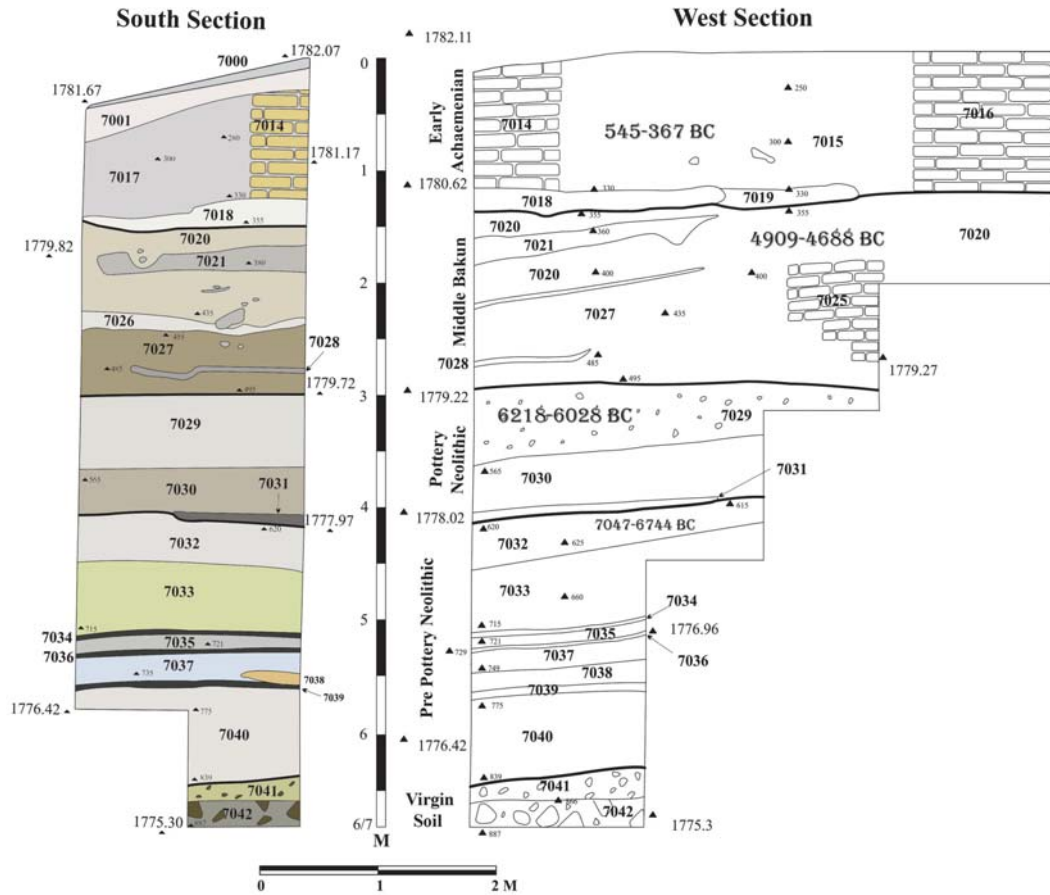


Fig. 5. The Trench G Harris Matrix and relative and absolute chronology.



**Rahmat Abad TR. G Sections ( Second Season, 2009 )**

Fig. 6. Western and southern sections of Trench G.

step. In all, 8 m of the trench's 10 m length was excavated in this way. The remaining  $2 \times 5$  m area was stratigraphically excavated downwards with the aim of understanding the earlier cultural layers. Overall, a total of 8.7 m of deposits were excavated on virgin soil, in which four cultural periods and 43 different contexts were identified (Table 1). Context numbers 7000 to 7009 date to the late Islamic period (Qajar graveyard); contexts 7010 to 7018 to the Achaemenid period (a mud brick structure); contexts 7019 to 7028 to the Bakun period; and contexts 7029 to 7040 to the Neolithic. The Neolithic period can be further divided into two different phases: Pottery Neolithic (contexts 7029 to 7031) and Pre-Pottery Neolithic (contexts 7032 to 7040). The last two contexts (7041 and 7042) represent virgin soil. The virgin soil was comprised of a mixture of large and small stones and it appears that the settlement at Tepe Rahmat Abad was first established on bedrock approximately 4 m below the present level of the plain.

| Context No. | Description of Context                         | Period            | Relative chronology        | Absolute Dating | Cultural Phase |
|-------------|--|-------------------|----------------------------|-----------------|----------------|
| 7000        | Surface layer, 20 cm thick                     | Late Islamic      | Nineteenth century AD      |                 | Qajar          |
| 7001        | Compact clay layer, 50 cm thick                |                   |                            |                 |                |
| 7002        | Burial   |                   |                            |                 |                |
| 7003        | Cumulative of the rubble, South wall of trench |                   |                            |                 |                |
| 7004        | Cumulative of the rubble, NW wall of trench    |                   |                            |                 |                |
| 7005        | A big stone, NW wall of trench                 |                   |                            |                 |                |
| 7006        | Paving of burial                               |                   |                            |                 |                |
| 7007        | Burial   |                   |                            |                 |                |
| 7009        | Skeleton                                       |                   |                            |                 |                |
| 7010        | Mud-brick pavement, 72 cm thick                | Achaemenian       | Fifth Century BC           | 545–367 BC      | Achaemenian    |
| 7011        | Clay layer, 60 cm thick                        |                   |                            |                 |                |
| 7012        | Mud-brick wall                                 |                   |                            |                 |                |
| 7013        | Compact Clay layer, 60 cm thick                |                   |                            |                 |                |
| 7014        | Mud brick wall                                 |                   |                            |                 |                |
| 7015        | Clay layer, 149 cm thick                       |                   |                            |                 |                |
| 7016        | Mud brick wall                                 |                   |                            |                 |                |
| 7017        | Clay layer, 40 cm thick                        |                   |                            |                 |                |
| 7018        | Clay layer, 25 cm thick                        |                   |                            |                 |                |
| 7019        | Mud brick collapse                             | Bakun             | Fifth millennium BC        | 4909–4688 BC    | Gap Phase      |
| 7020        | Clay layer, 160 cm thick                       |                   |                            |                 |                |
| 7021        | Clay layer, 20 cm thick                        |                   |                            |                 |                |
| 7022        | Small oven                                     |                   |                            |                 |                |
| 7023        | Small stones                                   |                   |                            |                 |                |
| 7024        | Ash layer, 16 cm thick                         |                   |                            |                 |                |
| 7025        | Mud-brick structure                            |                   |                            |                 |                |
| 7026        | Ash layer, 15 cm thick                         |                   |                            |                 |                |
| 7027        | Compact ash layer, 30 cm thick                 |                   |                            |                 |                |
| 7028        | Ash layer, 10 cm thick                         |                   |                            |                 |                |
| 7029        | Clay layer, 65 cm thick                        | Pottery Neolithic | Late seventh Millennium BC | 6218–6028 BC    | Mushki Phase   |
| 7030        | Clay layer, 50 cm thick                        |                   |                            |                 |                |
| 7031        | Ash layer, 5 cm thick                          |                   |                            |                 |                |



| Context No. | Description of Context                                | Period                | Relative chronology                | Absolute Dating | Cultural Phase    |
|-------------|---|-----------------------|------------------------------------|-----------------|-------------------|
| 7032        | Clay layer, 35 cm thick                               | Pre-Pottery Neolithic | Late eighth millennium BC<br><br>? | 7047– 6744 BC   | Rahmat Abad Phase |
| 7033        | Ash layer, 55 cm thick                                |                       |                                    |                 |                   |
| 7034        | Ash layer, 6 cm thick                                 |                       |                                    |                 |                   |
| 7035        | Burnt clay layer, 8 cm thick                          |                       |                                    |                 |                   |
| 7036        | Burnt clay layer, 5 cm thick                          |                       |                                    |                 |                   |
| 7037        | Burnt clay layer, soft and white colour               |                       |                                    |                 |                   |
| 7038        | Black ash layer, 8 cm thick                           |                       |                                    |                 |                   |
| 7039        | Ash layer, 7 cm thick                                 |                       |                                    |                 |                   |
| 7040        | Clay layer, 64 cm thick                               |                       |                                    |                 |                   |
| 7041        | Hard clay layer, 27 cm thick                          | Virgin Soil           |                                    |                 |                   |
| 7042        | Hard layer of river rocks and soil with lime deposits |                       |                                    |                 |                   |

Table 1. The cultural sequence of Trench G. Summary of context descriptions and the relative and absolute chronology.

### Islamic Period: Qajar Graveyard

The excavation indicated that there was a late-Islamic graveyard on top of Tepe Rahmat Abad. Our surveys and field visits to other prehistoric mounds within the region revealed that during the late-Islamic period, especially the Qajar era, the surfaces of such sites were favoured for human burials, probably because of their high elevation. In Trench G, three burials belonging to the Qajar era were identified (Fig. 7). They were simple pits without any structures, oriented towards Mecca and covered with rocks and large pieces of pottery. A larger rock was placed at each end of the grave to mark its the location. One of the graves was fully excavated and there was one male skeleton lying on his right side with stone beds in front of the pelvis (Fig. 8). The Qajar graves also badly damaged the Achaemenian contexts of the site.

### Achaemenian Period

Underneath the Islamic graves, part of a massive mud brick structure/platform was identified (Figs 9, 10). The limited ceramic data from this phase indicates that it was established during the Achaemenian period. The Achaemenian layers were more than 3 m in thickness (contexts 7015 to 7018). The later part of this phase yielded a radiocarbon date for a charcoal sample, TKa-15307, found in context 7015 (the context between the two circular structures): 545–367 cal. BC (2415 ± 35 uncal. BP) with 89.6% accuracy (Figs 11, 12; Table 4). Owing to the limitation of excavation it is difficult to determine the function of the building; however, it is important to note its location at the entrance of Darre-ye Bolaghi, in counterpoint to Pasargadae, the capital of Cyrus the Great. A total of nine contexts (numbers 7010 to 7018) were identified as belonging



Fig. 7. Qajar burials.



Fig. 8. One of the Islamic skeletons.

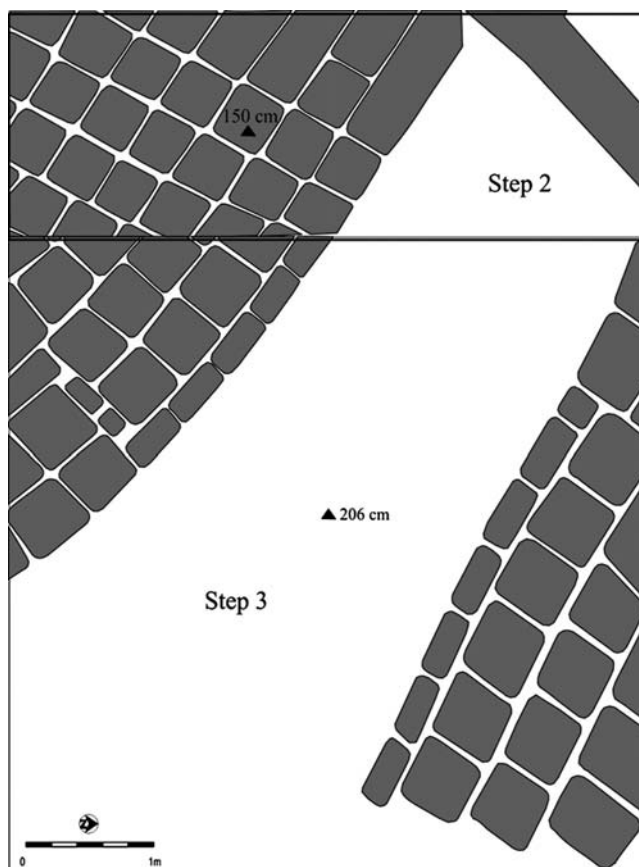


Fig. 9. Achaemenian curvilinear mud brick structures (Trench G).

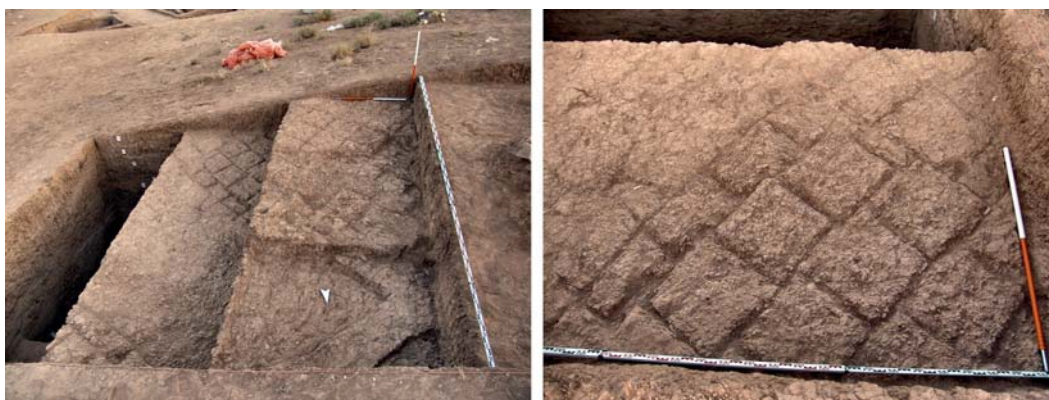


Fig. 10. Achaemenian mud brick structure of Trench G.



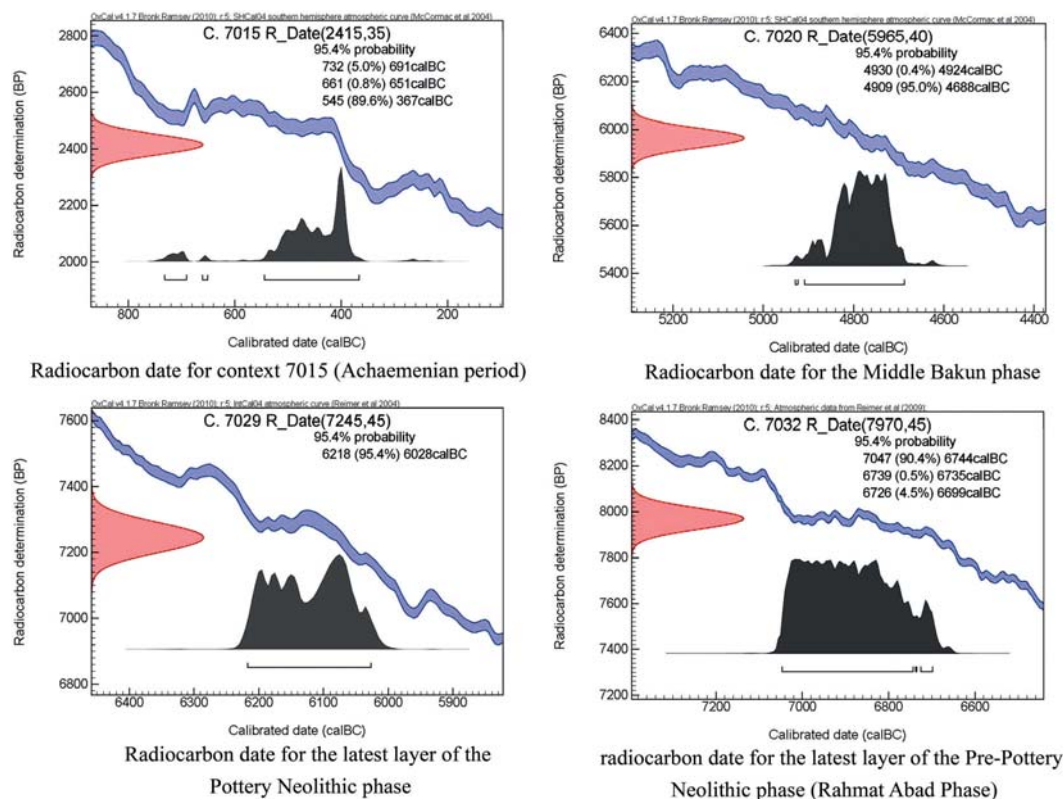


Fig. 11. New radiocarbon dates from second seasons of Tepe Rahmat Abad excavation.

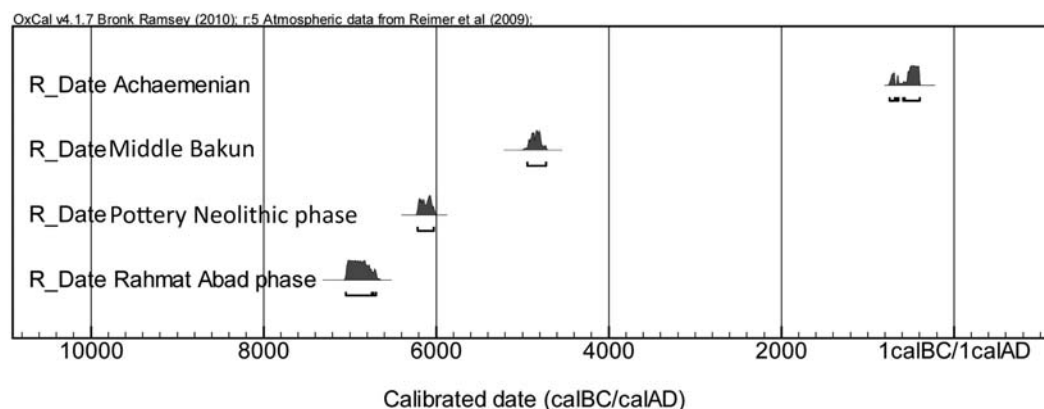


Fig. 12. Calibrated radiocarbon dates for Trench G.



Fig. 13. Achaemenian pottery samples of Trench G.

to the Achaemenian period, including compact soil layers and a mud brick structure (Table 1). The surface consisted of seven rows of mud bricks, each with the dimensions of  $40 \times 40 \times 10$  cm. Based on the direction of the mud bricks, the structure must have extended towards the outer part of the trench. In order to preserve the mud bricks, we made a step, 2 m in width, and continued digging on the lower step. In this step another mud brick structure was discovered, 2 m below the surface and 0.7 m below the first. It consisted of two curvilinear structures with 15 rows of mud bricks (Figs 9, 10). These two structures were symmetrically located in the northern and southern parts of Trench G (contexts 7014 and 7016). Two types of mud bricks were identified. Most were  $40 \times 40 \times 10$  cm but the mud bricks used at the edges of the structures were  $40 \times 20 \times 10$  cm.

Plenty of prehistoric pottery sherds were recovered among the mud bricks. This was perhaps due to the levelling of the prehistoric site's surface to make way for the new Achaemenid structure, which damaged the upper Bakun layers. It is quite likely that Rahmat Abad functioned as a strategic location at the entrance to the Bolaghi valley, allowing control or supervision of the king's road between Pasargadae and Persepolis, used by its new Achaemenid occupants. Many Achaemenian sites were also discovered in Darre-ye Bolaghi,<sup>5</sup> attesting to the importance of this route. The limited extent of the excavation and the huge size of the mud brick structures preclude us to ascertain the specific function(s) of those rooms. Identification was further hindered by the disturbance caused by the later Islamic graves. The wheel-made Achaemenian pottery included simple red ware, well fired and in good condition (Fig. 13).

<sup>5</sup> Attayi 2005; Attayi and Boucherlat 2006.

## Bakun Period

In the Fars region, the Chalcolithic period started around the late sixth to the early fifth millennium BC. “Bakun society” represents the Chalcolithic period of the highland culture of Fars, which maintained close relations with societies in lowland southwestern Iran.<sup>6</sup> The Bakun period consists of three phases, each represented by different sites; that is, Bakun B (early), Tall-e Gap (middle) and Bakun A (late), and each phase is distinguished by characteristic ceramic styles.<sup>7</sup> The economy was mainly based on agro-pastoral life, supplemented by hunting. The settlements were generally small (< 1 ha) but a few of them were as large as 6 to 7 or 8 ha, indicating a two-tiered site hierarchy. Excavations thus far conducted at the Bakun sites have not yielded any evidence of the presence of religious centres but attest to craft production, long distance trade, and the earliest examples of administration and sophisticated pastoralist life in the Fars highlands.<sup>8</sup>

The first season of excavation at Rahmat Abad exposed ceramic workshops dating back to the first half of the fifth millennium BC.<sup>9</sup> The workshops are contemporary with those known at Tepe Pardis, dating from 4909–4688 cal. BC.<sup>10</sup> The discovery of round kilns and their remains, such as waste materials and slag, indicates direct evidence of ceramic production. Close to Rahmat Abad, the sites recorded as numbers 73, 91 and 131 in the Darre-ye Bolaghi survey demonstrate a dense distribution of ceramic production sites, in which kilns and artefacts related to ceramic production have been identified.<sup>11</sup> Those three sites are quite comparable to Rahmat Abad in terms of the large scale of production. At Rahmat Abad, cultural materials of 1.8 m thickness belonged to the Bakun period (Figs 5, 6). As suggested above, however, building activities during the Achaemenian period probably removed the upper portions of the Bakun levels in this part of the mound.

## Stratigraphy

Eleven contexts, 7018 to 7028, belonging to the Bakun period were identified from Trench G (Fig. 6; Table 1). These can tentatively be grouped into three main phases. Phase 1 contained the disturbed layers (latest) and consisted of two adjacent contexts, 7018 and 7019, located in the western part of the trench and stratified above context 7017. They covered an area of 90 × 120 cm with a maximum depth of 25 cm. Context 7019 consisted of collapsed, burnt mud bricks with dimensions of 8 × 15 cm, while the adjacent context 7018 was very ashy with charcoal remains. Phase 2 was distinguished by an oven and ash and included contexts 7020, 7021 and 7022. Context 7020 extended across the entirety of the trench and had a depth of 160 cm, but contexts 7022 and 7021 were located in the eastern part of the trench only. Context 7022 represented a small circular oven, measuring 30 cm in diameter and 8 cm in depth. It had a reddish colour from heat

<sup>6</sup> Alizadeh 2004; 2006; Weeks *et al.* 2006.

<sup>7</sup> Stein 1936; Schmidt 1939; Langsdorff and MacCown 1942; Sardari *et al.* 2012.

<sup>8</sup> Alizadeh 2006.

<sup>9</sup> Bernbeck *et al.* 2005; Marghussian *et al.* 2009.

<sup>10</sup> Fazeli Nashli *et al.* 2007.

<sup>11</sup> Helwing and Seyedin 2010.



and was covered by a 20 cm-thick layer of ash (context 7021). The fill was composed of compact clay and stones that were blackened from being exposed to heat. Contexts 7021 and 7022 yielded no ceramics.

Phase 3 deposits were stratified below the oven discussed above and so have been defined as a separate occupation phase. Contexts 7023 to 7028 belong to this phase, which had a maximum depth of 90 cm. Context 7020 is also included in this phase since it directly overlays 7026 and 7023, and is partly adjacent to 7024 and 7025. A mud brick wall (context 7025) 85 cm in length was identified in the eastern section of the trench. A total of nine courses of mud bricks were defined, each 7 × 25 × 25 cm in dimensions. Associated with this wall were layers of soft ash (context 7024), around 15 cm in depth and covering an area of roughly 70 × 50 cm. Close to this eastern section, five stones were found, varying in size and covering an area of roughly 80 × 30 cm. They do not appear to have been structural and their function is unclear. In the south and south-eastern part of the trench, contexts 7026 to 7028 were excavated. These had a maximum depth of 35 cm and extended over an area of roughly 60 × 200 cm. Context 7027 was about 30 cm thick, consisting of compact soil. This was stratified below context 7026 and above context 7028, both of which were characterised by ashy sediments. Context 7026 also had inclusions of charcoal and small stones. Very little cultural material was found in contexts 7026 and 7027. Context 7028 contained principally Bakun sherds but with some, probably intrusive, Neolithic sherds, as well as lithics and some animal bones. Stratified directly below the Bakun deposits, without any sterile layer, were Neolithic layers, although occupation was clearly not continuous (see below).

### *Relative chronology*

The pottery from these phases is typical of the Bakun period. It is fine and primarily handmade, with signs of the occasional use of a slow wheel. The surface is painted (black on buff or red on buff) with geometric and simple animal designs, sometimes on both sides. The finer vessels have mineral temper, whereas larger vessels have mineral and vegetable temper (Figs 14, 15). In some cases, the pottery is deformed and has melted as a result of the kiln temperature becoming too high. In these instances the black paint has turned dark green. Most of the ceramics consist of bowls, beakers, small cups and small jars.<sup>12</sup> For the purposes of the following analysis, Early Bakun is thought to be represented at Bakun B and Tall-e Gap I; the Middle Bakun at Tall-e Gap II; and the Late Bakun at Tall-e Bakun A and Tall-e Nokhodi.<sup>13</sup>

The pottery from the disturbed layers, in Phase 1, has typical motifs of the Middle Bakun phase such as rectangles filled with dashes, vertical zigzags, and diamonds with a strip across the middle.<sup>14</sup> Nearly all of the remaining pottery came from context 7020, which extended over Phases 2 and 3. Accordingly, the dates of these two phases will be discussed together. In contrast to Phase 1, none of the typical Middle Bakun motifs such as dotted backgrounds and the designs described above were found in Phases 2 and 3. The occasional motif from 7020 can be compared with Tall-e Gap II;<sup>15</sup> however, the best parallels are found with early Bakun ceramics (e.g.,

<sup>12</sup> Fazeli Nashli and Azizi Kharanaghi 2008, pp. 109–110.

<sup>13</sup> Sami 1971.

<sup>14</sup> Egami and Sono 1962, fig. 13: 5, 6 and 7 (dashes), fig. 15: 5 (vertical zigzags), pl. XXXA: 9 and 10 (diamonds).

<sup>15</sup> Egami and Sono 1962, fig. 20: 7.

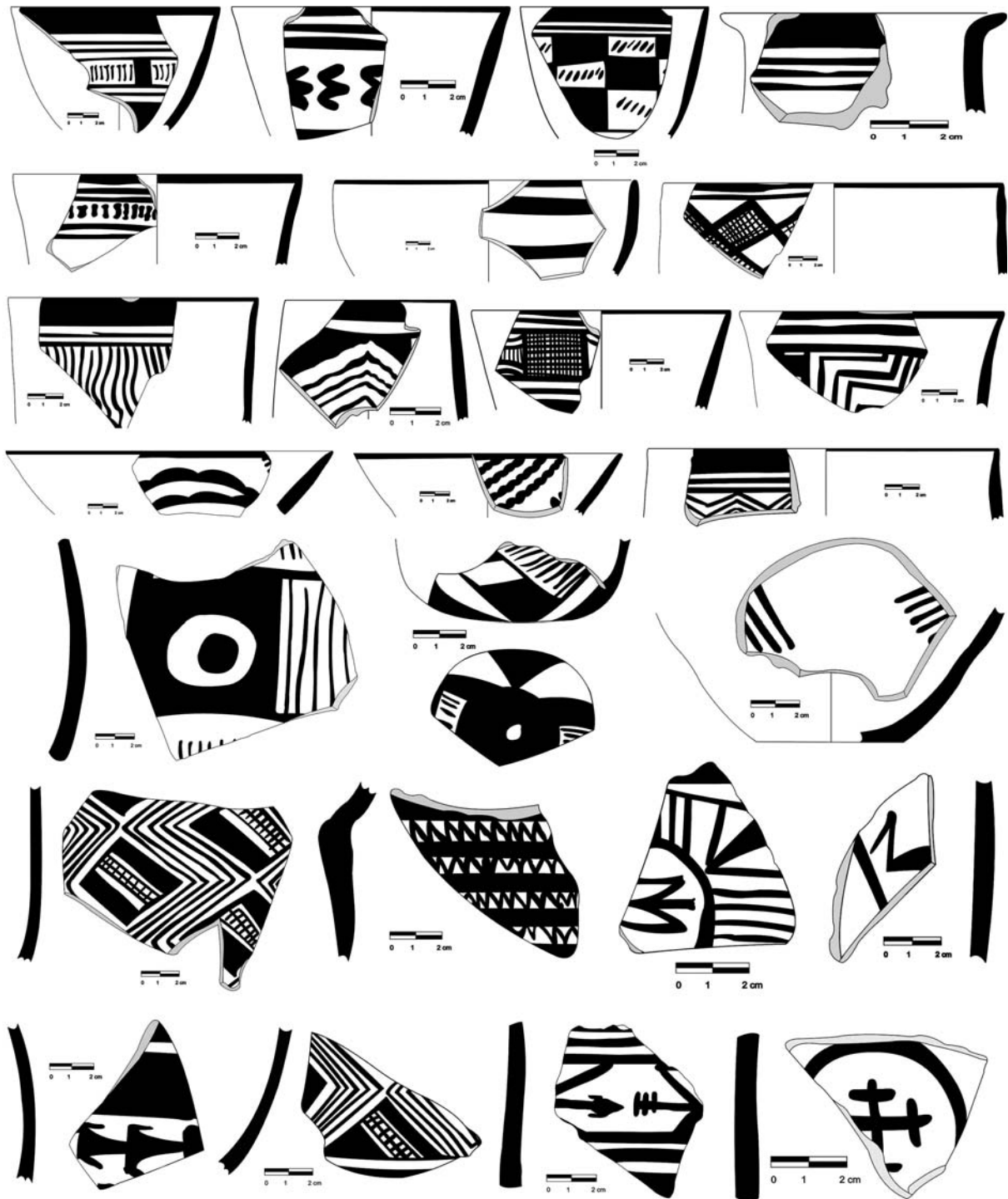


Fig. 14. Representative Bakun pottery sherds from Trench G.



Fig. 15. Middle Bakun pottery samples of Trench G.



Fig. 16. Diagnostic painted clay spindle whorls from the Middle Bakun (Gap) layers of Trench G.



context 7020/ RN.7128, 7204). Although the lack of data makes any chronological attribution tentative, it seems most probable, based on the available evidence, that Phases 2 and 3 span the Early to the early Middle Bakun periods.

Two painted pottery spindle whorls with fabric directly comparable to the associated pottery were found in Trench G. They are conical in shape, handmade with fine mineral temper and are buff in colour with black geometric designs (Fig. 16). Similar conical-shaped spindle whorls with painted decoration were found at Tall-e Gap, primarily in the earliest levels, Tall-e Gap Phase I (Levels 14b, 15, 16 and 17), but also in Phase II (Levels 5b and 10).<sup>16</sup> Cone-shaped painted and unpainted spindle whorls were also found during the excavations of Tall-e Bakun B.<sup>17</sup> Spindle whorls have been found at Tall-e Bakun A as well, although Alizadeh remarks that in sharp contrast to the earlier specimens, those from Tall-e Bakun A tended to be unpainted and simpler in form.<sup>18</sup> This evidence further supports the dating of these phases of Rahmat Abad to the earlier part of the Bakun period.

### *Absolute chronology*

Although several Bakun-period sites have been excavated within the region, most of them have been dated only by relative chronology. The radiocarbon dates from Rahmat Abad are therefore important to refining the Bakun chronology. The second season's excavation in Trench G yielded two new radiocarbon determinations. The first was from a charcoal sample, TKa-15309, found in context 7020 and gave a calibrated date of 4945–4763 BC (5965 ±40 uncal. BP). The second was from charcoal found in an ashy layer, context 7026, and gave a calibrated date of 4852–4702 BC (5910 ±40 uncal. BP; Figs 11, 12; Table 4). These dates are in accord with the suggestion that Rahmat Abad Phases 2–3 correspond to the Early/early Middle Bakun period. Based on dates for the Shamsabad period from Tall-e Jari A and Tall-e Bakun B, a date of around 5000 BC can be postulated for the beginning of the Early Bakun period.<sup>19</sup> For the subsequent Middle Bakun sub-phase, we have one date from Toll-e Nurabad,<sup>20</sup> whose pottery assemblage is comparable with that of Gap II. The dates, a range of 4745 to 4502 cal. BC,<sup>21</sup> fall fairly neatly in between these two parameters.

### **The Pottery Neolithic Period**

Recent archaeological campaigns in the Fars region have yielded a number of Epipalaeolithic and subsequent sites in the Arsanjan and Darre-eye Bolaghi (Tang-e Bolaghi) valleys, dating back to ca. 18,000–8000 cal. BC. The cave site of TB-75 (Haji Bahrami Cave) yielded evidence of “Proto-Neolithic and/or aceramic Neolithic” occupation in Layers 4–3, dated from the late tenth

<sup>16</sup> Egami and Sono 1962, p. 34, pl. XL.

<sup>17</sup> Alizadeh 2006, p. 40; Egami and Sono 1962, pl. 4.

<sup>18</sup> Alizadeh 2006, p. 40.

<sup>19</sup> See Alizadeh 2006, p. 120, table 9.

<sup>20</sup> Potts and Roustaie 2006.

<sup>21</sup> Weeks *et al.* 2006, p. 68, table 3.2.

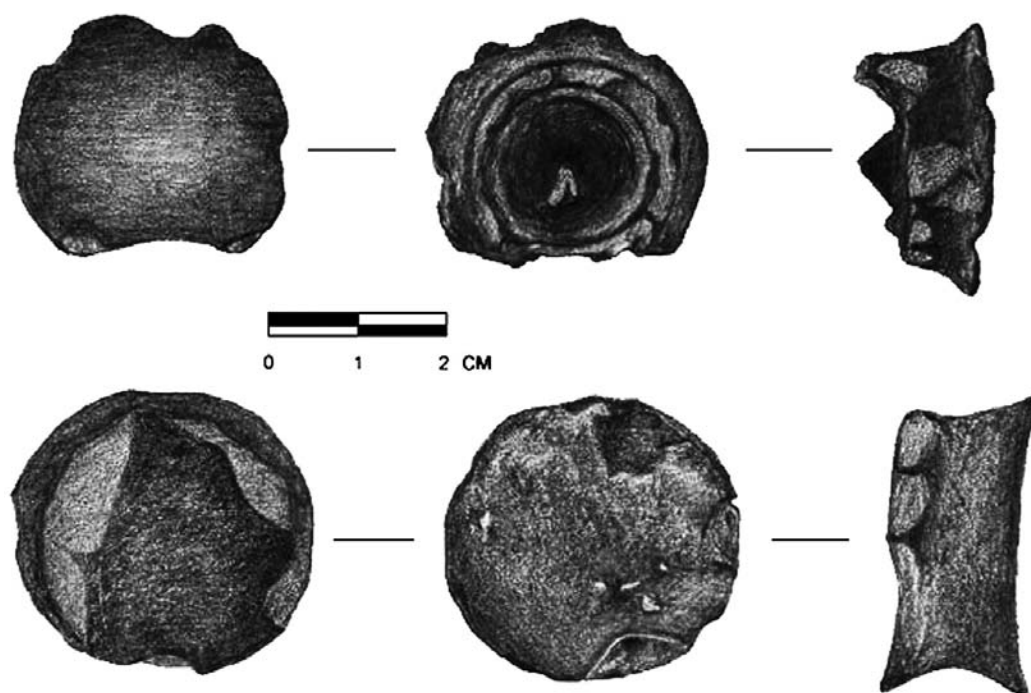


Fig. 17. Clay objects from the Pottery Neolithic layers of Trench G.

to the mid-eighth millennia cal. BC, above the Epipalaeolithic layers.<sup>22</sup> This information is valuable in dating the beginning of the Neolithic period in the Fars region, although the cultural remains of the “Proto-Neolithic and/or aceramic Neolithic” occupation have been poorly documented. On the other hand, the end of the Neolithic period in Fars is relatively well defined. As with ending of the Neolithic period in other parts of central Iran,<sup>23</sup> it is dated from around 5200 cal. BC, the Shamsabad phase. The Neolithic period of Fars in these millennia is divided into Pre-Pottery and Pottery Neolithic; Tepe Rahmat Abad is the first Neolithic site in the region at which both of these phases were documented in secure stratigraphic contexts. The Pre-Pottery and Pottery Neolithic phases comprise cultural deposits of 3.5 m thickness in Trench G (Figs 5, 6). Among these, 1.5 m belongs to the Pottery Neolithic layers (Contexts 7029–7031), situated directly beneath the Bakun layers. Compact soil, ash and burnt layers with Neolithic materials were recovered, but no structural evidence was found.

Eight clay objects found in Trench G (Fig. 17) belong to the Pottery Neolithic. They are neatly made and were fired well. They are cylindrical in shape but tapered to a blunt point at one end. Such objects have also been found at other Neolithic sites in Fars, including Tall-e Mushki,<sup>24</sup>

<sup>22</sup> Tsuneki and Zeidi 2008.

<sup>23</sup> Pollard *et al.* 2012.

<sup>24</sup> Fukai *et al.* 1973, pls. XIV: 2, XV: 25, XXXVIII and XXXIX.

Tol-e Bashi<sup>25</sup> and Tol-e Nurabad.<sup>26</sup> The excavators of Mushki suggest that such objects were used as ornaments for earrings,<sup>27</sup> while others have suggested that they may have served as labrets, gaming pieces, mullers, cosmetic mortars, or memorial objects.<sup>28</sup> The function of these objects therefore remains unclear.

### *Pottery assemblages*

In total 75 pottery sherds were found in the Pottery Neolithic layers of Trench G (Figs 18, 19). The ceramics are all handmade and fired at low temperatures. Red or reddish ware shows organic temper, while coarse wares show chaff. Most of the Neolithic sherds are unpainted but some of them are painted with very simple black lines. The vessels had simple rims with flat bases and carinated bodies. No complete vessels were recovered but the majority of sherds belonged to bowls. The red slipped bowls, with painted motifs such as geometric lines and dots, parallel lines, ladder lines and simple cross lines and oblique and vertical ladder motifs (Fig. 19: 4, 8, 9, 22, 24–32, 34, 35, 37, 42, 51 and 53), resemble those of Tall-e Mushki.<sup>29</sup> However, some motifs are simpler than those of the classic Mushki and others are comparable with the Bashi motifs.<sup>30</sup> Further, motifs unknown at either Mushki or Bashi (Fig. 19: 2, 5, 10, 13, 33, 38, 46, and 48) are also present. Interestingly, all of the sherds from the lowest Pottery Neolithic layers are just simple ones without any decoration. They are fragile and made of a coarse, almost reddish ware with chaff tempers. Unfortunately, no complete vessels were found. Yet there were some simple rims and the most common form was simple bowls (Fig. 19: 16, 20, 65–73). The future study of these sherds may lead to subdivision of the Neolithic pottery sequence in this trench.

### *Chronology*

The relative chronology of the Pottery Neolithic in Fars is far from clear. It was Vanden Berghe who initially identified distinct ceramic wares at Tal-e Mushki and Tal-e Jari, carried out a series of test excavations, and proposed a sequence of Jari followed by Mushki.<sup>31</sup> Full-scale excavations were conducted between 1959 and 1971 by the Tokyo University Iraq-Iran Expedition at Tal-e Jari A and B<sup>32</sup> and at Tal-e Mushki.<sup>33</sup> Based on their more extensive investigation, they proposed a new sequence of Mushki followed by Jari.<sup>34</sup> Unfortunately, the two phases were never found clearly stratified in relation to one another in one site, so the dispute regarding the order of their succession continued until recently. Studies of the ceramic decorative motifs, regional

<sup>25</sup> Pollock *et al.* 2010, p. 184.

<sup>26</sup> Weeks *et al.* 2010, p. 252–254, fig. 3: 189.

<sup>27</sup> Fukai *et al.* 1973, fig. 99, table 49.

<sup>28</sup> Hole 1977, p. 236, Delougaz and Kantor 1996, p. 252 (labrets); Masson and Sarianidi 1972, p. 42 (gaming pieces); Ghirshman 1938, pp. 23–24, Hole 1977, p. 234 (mullers); Stronach 1961, p. 107 (cosmetic mortars); Pollock *et al.* 2010, p. 189 (memorial objects).

<sup>29</sup> Nishiaki 2003; Herzfeld 1929.

<sup>30</sup> Pollock *et al.* 2010, pp. 148–151, fig. 24: 23, 41, 45.

<sup>31</sup> Vanden Berghe 1952, pp. 212–214, figs 28 and 29; 1954, pp. 41–42, 394.

<sup>32</sup> Egami and Sono 1962; Egami *et al.* 1977.

<sup>33</sup> Fukai *et al.* 1973.

<sup>34</sup> Fukai *et al.* 1973, p. 77.

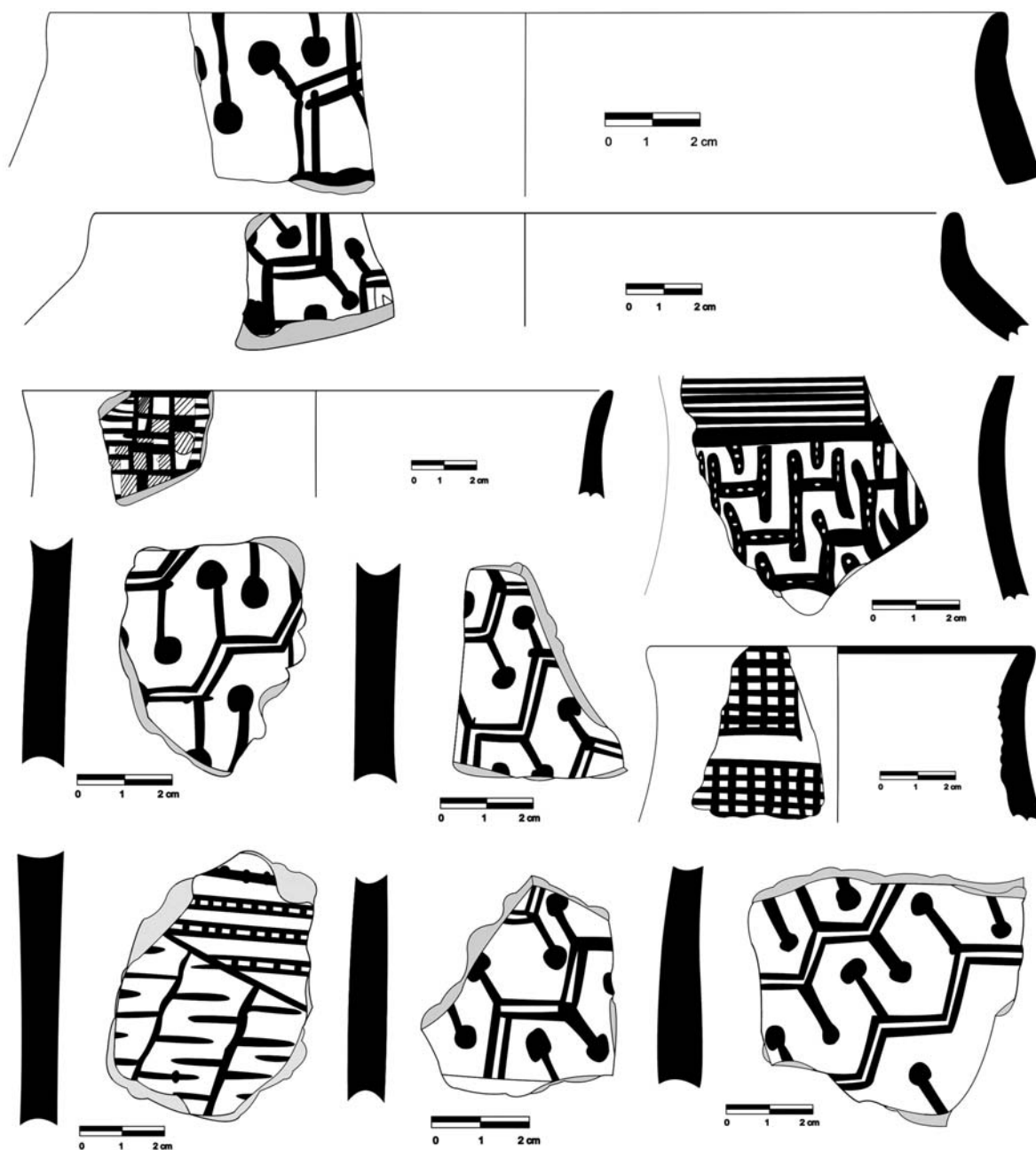


Fig. 18. Pottery sherds of the Pottery Neolithic phase.





Fig. 19. Pottery samples of the Pottery Neolithic phase of Trench G.

parallels, settlement data, and, more recently, new radiocarbon dates<sup>35</sup> all, however, support the sequence proposed by the University of Tokyo team.

More recently, this sequence has been further refined by the excavators of Toll-e Bashi, who identified a “Bashi” transitional phase between Mushki and Jari.<sup>36</sup> The lowest layer of this

<sup>35</sup> Maeda 1986 (ceramic decorative motifs); Voigt and Dyson 1992, pp. 135–137 (regional parallels); Sumner 1990, 1994 (settlement data); Nishiaki 2010a (radiocarbon dates).

<sup>36</sup> Bernbeck *et al.* 2003; Pollock *et al.* 2010.

sub-phase, Level VI, appears to correspond partly to Mushki's TMB pit.<sup>37</sup> Table 2 below provides a tentative summary of the chronological positions and the dates of the related Neolithic sites. More recently discovered sites such as those at Mian Rud<sup>38</sup> and the Qasr-e Ahmad survey<sup>39</sup> have been omitted because of the unavailability of detailed published data. The dating of Kushke Hezar<sup>40</sup> and Kutahi<sup>41</sup> is likewise uncertain and so they have not been included in the table for the time being. The Pottery Neolithic layers of Rahmat Abad did yield one new radiocarbon date. A charcoal sample, TKA-15311 from Context 7029, one of the latest Pottery Neolithic layers in Trench G, provided a radiocarbon determination of 6217–6028 cal. BC (7245+/-45 uncal. BP, 95.4% accuracy) (Figs 11, 12; Table 4). This falls within a time range comparable to the latest layer, Level I, at Mushki.<sup>42</sup>

| Date | Archaeological Phase   | Rahmat Abad              | Mushki              | Bashi  | Jari B   | Jari A  | Nurabad Trench A       |
|------|------------------------|--------------------------|---------------------|--------|----------|---------|------------------------|
| 5600 | Late Jari              |                          |                     |        | V to VII | 7?      |                        |
| 5650 |                        |                          |                     |        |          |         | Phase 20 (5800- 5620)  |
| 5700 |                        |                          |                     |        |          |         |                        |
| 5750 |                        |                          |                     |        | III - IV |         | Phase 23 (5920- 5710)  |
| 5800 |                        |                          |                     |        |          |         | Phase 24B (5930- 5720) |
| 5850 |                        |                          |                     |        | II       |         | Phase 25 (5920- 5730)  |
| 5900 |                        |                          |                     |        |          |         | Phase 26 (5930- 5720)  |
| 5950 |                        |                          |                     | I      |          |         |                        |
| 6000 | Late Bashi (B/J trans) |                          |                     | II?    | I?       | Hiatus? |                        |
|      | Middle Bashi           |                          |                     | V- III |          |         |                        |
| 6050 | Early Bashi            |                          | TMB pit             | VI     |          | 7       |                        |
|      | Mushki                 | Context 7029 (6217–6028) |                     |        |          |         |                        |
| 6100 |                        |                          | Level 1 (6227–6082) |        |          |         |                        |
| 6150 |                        |                          |                     |        |          |         |                        |

<sup>37</sup> Nishiaki 2010a, p. 3.

<sup>38</sup> Zarch *et al.* 2011.

<sup>39</sup> Bernbeck *et al.* 2006.

<sup>40</sup> Alden *et al.* 2004.

<sup>41</sup> Gotch 1968, p. 169.

<sup>42</sup> Nishiaki 2010a, table 1.

| Date | Archaeological Phase  | Rahmat Abad                 | Mushki                 | Bashi | Jari B | Jari A | Nurabad Trench A |
|------|---|-----------------------------|------------------------|-------|--------|--------|------------------|
| 6200 |   |                             | Level 2<br>(6198–6271) |       |        |        |                  |
| 6250 |   |                             |                        |       |        |        |                  |
| 6300 |   |                             | Level 3<br>(6332–6421) |       |        |        |                  |
| 6350 |   |                             |                        |       |        |        |                  |
| 6400 |   |                             | Level 4 and 5?         |       |        |        |                  |
| 6450 |   |                             |                        |       |        |        |                  |
| 6500 |   |                             |                        |       |        |        |                  |
| 6550 |   |                             |                        |       |        |        |                  |
| 6600 |   |                             |                        |       |        |        |                  |
| 6650 |   |                             |                        |       |        |        |                  |
| 6700 |   |                             |                        |       |        |        |                  |
| 6750 | Rahmat Abad<br><u>End Pre-Pottery<br/>Phase in Tepe<br/>Rahmat Abad</u> | Context 7032<br>(7047–6744) |                        |       |        |        |                  |
| 6800 |   |                             |                        |       |        |        |                  |
| 6850 |   |                             |                        |       |        |        |                  |
| 6900 |   |                             |                        |       |        |        |                  |
| 6950 |   |                             |                        |       |        |        |                  |
| 7000 |   |                             |                        |       |        |        |                  |
| 7050 |   |                             |                        |       |        |        |                  |

Table 2. The chronological sequence of related Neolithic sites in Fars (all dates are in cal. BC).

### Pre-Pottery Neolithic: Rahmat Abad Phase

#### *Stratigraphy*

This phase represents the first reliable evidence of Pre-Pottery Neolithic occupations in Fars, for which we propose a term, the “Rahmat Abad phase”, in this paper (Table 1; Fig. 6). The Pre-Pottery Neolithic layers were found stratified directly below the Pottery Neolithic deposits, although they are considerably earlier in date. A total of nine contexts were defined (7032 to 7040) for the 2 m-thick Pre-Pottery Neolithic deposits. Again, no structural features were identified, only layers of soil and ashy/burnt layers. The cultural materials found in this phase were lithics (Fig. 20), animal bones and some charcoal samples.

### *Chronology*

Three radiocarbon dates were obtained from the Pre-Pottery Neolithic layers in Trench A during the first season of excavation at Rahmat Abad.<sup>43</sup> All of them indicate a date of the late eighth to the early seventh millennium BC (Table 3).

| Lab number         | Provenience                | Material | Lab date bp | Calibrated date BC<br>(2 sigma range) |
|--------------------|----------------------------|----------|-------------|---------------------------------------|
| KIA33173           | Unit Loc 61, Level A VI    | charcoal | 8023 ± 45   | 7080–6770                             |
| UZ 5331/ETH 318822 | Unit A Loc 62, Level A VII | charcoal | 7925 ± 75   | 7050–6640                             |

Table 3. Radiocarbon dates for the Pre-Pottery Neolithic layers of Trench A.

In the second season, we sampled a charcoal deposit, TKA-15313, from context 7032 of Trench G (Table 1), which corresponds to the latest layer of the Pre-Pottery Neolithic (Figs 5, 6). This provided a date of 7047–6743 cal. BC (7970 ± 45 uncal. BP, 90.4% accuracy) (Figs 5–13; Table 4), which is virtually indistinguishable from the dates from the Trench A sounding. Thus we now have good evidence to suggest that the latest Pre-Pottery Neolithic at Rahmat Abad can be dated from the late eighth to the early seventh millennium BC. However, we should note that Pre-Pottery Neolithic deposits continue 2 m downwards from this level. It is hoped that radiocarbon dates can be obtained for these layers in the future. Potentially, dating of the earlier layers may help to investigate the transitions from the Epipalaeolithic, as known at the Haji Bahrame Cave,<sup>44</sup> to the Pre-Pottery Neolithic.

### *Subsistence economy*

Recently, Weeks synthesised the long-term development of subsistence economy in the Fars region from the Epipalaeolithic to the Neolithic, indicating that farming communities emerged in the region during the eighth millennium BC.<sup>45</sup> The early Neolithic economy of the Fars region included a combination of cultivation of two-row and six-row barley, emmer and einkorn wheat, and bread wheat,<sup>46</sup> and herding of domesticated sheep, goats and cattle.<sup>47</sup> At the same time, the communities exploited wild plant and animal resources, by means such as hunting, to supplement their food resources. Further to the south, in the Kerman district at Tepe Yahya and Daulatabad there is early evidence of cultivation of einkorn, emmer wheat, barley and grapes, and of the keeping of domestic animals such as cattle, sheep and goats. It seems that even during the sixth millennium BC, the suitable environment of the region also allowed communities to exploit wild resources such as gazelles, wild boar, onager, birds and land tortoises.<sup>48</sup>

<sup>43</sup> Bernbeck *et al.* 2008, p. 38.

<sup>44</sup> Tsuneki and Zeidi 2008, p. 158, table 10.1.

<sup>45</sup> Weeks 2013.

<sup>46</sup> Miller and Kimiaie 2006.

<sup>47</sup> Mashkour *et al.* 2006.

<sup>48</sup> Maeda 1986.





Fig. 20. Selected flaked stone artefacts from the Pre-Pottery Neolithic phase of Trench G.

Evidence on plant cultivation is available at Rahmat Abad, while that of the animal exploitation is as yet under study. Tenberg (personal communication) reveals the presence of crop plants, consisting of hulled and free-threshing barley (*Hordeum vulgare*), emmer wheat (*Triticum dicoccum*) and free-threshing wheat (*Triticum cf aestivum*). The latter is noted only in small amounts in samples from the Neolithic and Chalcolithic levels, and seems thus far to be absent in the Pre-Pottery Neolithic levels. The cereal remains analysed to date all correspond to domesticated species and there has been no indication of the gathering of wild cereals at the site. Remains of what seem to be cultivated pulses of pea-type (*Vicia/ Pisum*) are also attested (two seeds) from Chalcolithic contexts. Besides these traditional crops (wheat, barley and pulses), the plant assemblage at the site consists of pistachio nuts, without doubt gathered from the surroundings, and seeds/fruits from a series of wild herbaceous plants (grasses, mustard family, wild pulses, etc.) that are likely to correspond to weeds cleaned out from crops.

#### *Lithic industry*

Trench G yielded 239 flaked stone artefacts from the Pre-Pottery Neolithic layers (Fig. 20). The vast majority of them are made of local chert ( $N = 201$ ), while a far smaller number of limestone ( $N = 36$ ) and obsidian artefacts ( $N = 2$ ) are also present. The limestone assemblage consists of only unretouched flakes, probably corresponding to waste pieces from ground stone manufacture.

The obsidian pieces are regular bladelets (Fig. 20: 8, 9), most likely to have been imported from the Anatolian obsidian sources.

The local chert assemblage represents a distinct bladelet industry, characterised by the predominant use of pressure debitage. The cores are bullet-shaped with a single platform, displaying regular bladelet removal scars at the body's periphery (Fig. 20: 1). The retouched tools are also dominated by bladelets, but include some blades as well. The most common tools are sickle elements (Fig. 20: 3, 4). These are regular blades and bladelets that retain glossed edges and snapped ends. Rare but distinct tool types worthy of mention are backed and/or obliquely truncated bladelets (Fig. 20: 7). The occurrence of a microburin suggests use of the microburin technique for manufacturing these bladelet tools (Fig. 20: 6). The remaining retouched tools include diverse retouched, denticulated and notched blades/bladelets, as well as a few burins (Fig. 20: 5).

The features described above show that the Rahmat Abad industry is most comparable to the Early M'lefaatian, defined by Kozłowski after the Pre-Pottery Neolithic assemblages of Tell M'lefaat in northern Iraq.<sup>49</sup> The occurrence of a M'lefaatian assemblage at Rahmat Abad attests that the Pre-Pottery Neolithic communities of the Fars region shared the tradition that was geographically distributed from the northern part of the Zagros Mountains to the southwest. It is important to note that the Rahmat Abad assemblage (Fig. 20) differs from the lithic assemblages recovered from "Proto-Neolithic and/or Pre-Pottery Neolithic" layers of Haji Bahrame Cave.<sup>50</sup> The latter assemblages, some of which date from as late as the early eighth millennium BC, reportedly contain numerous end-scrapers but no sickle elements. These artefacts are rather reminiscent of the earlier tradition. Accordingly, the Rahmat Abad material provides us with a valuable benchmark for the presence of an indisputable Pre-Pottery Neolithic lithic industry in Fars by the end of the eighth millennium BC. At the same time, the distinction between the Pre-Pottery Neolithic and the Pottery Neolithic assemblages at Rahmat Abad (Fig. 21) is also notable. The



Fig. 21. Flaked stone artefacts from the Pottery Neolithic phase of Trench G. Left: blade and bladelet tools, Right: Geometrics and bladelet tools.

<sup>49</sup> Kozłowski 1999.

<sup>50</sup> Tsuneki and Zeidi 2008.

latter assemblage, with its best parallels seen at Tall-e Mushki,<sup>51</sup> is characterised by the more common production of wider blades and flakes, and the predominant use of geometric arrow-heads. The absence of these elements in the Pre-Pottery Neolithic phase of Rahmat Abad should certainly reflect a chronological gap of several centuries between them. The transitional processes from the Pre-Pottery to the Pottery Neolithic in Fars await investigation in the future.

## Conclusion

The cultural sequence revealed at Tepe Rahmat Abad is unique amongst the excavated sites of the Fars region. Of particular significance are the repeated human occupations at this small mound over the millennia since the early Neolithic period. The geographical location of the site, its easy access to the different environmental resources such as rivers, fertile soil, mountains and forests, and its strategic location, especially during the historical periods, attracted human groups to this mound at several points in time.

The oldest Pre-Pottery Neolithic layers are the first of their kind identified in the whole region of Fars. Our preliminary analysis of the associated materials and radiocarbon dates demonstrates that the Neolithic economy existed in the region by the end of the eighth millennium BC. Comparable settlements appear to have been common in the region, as suggested by our recent soundings at Gasr-e Ahmad in Qar-e Aghaj river basin, Kavar plain.<sup>52</sup> Although the origin of the first Neolithic community in Fars has not been clarified yet, close ties with communities in other parts of the Zagros Mountains are attested by the lithic industry. In order to facilitate further comparative analyses of the Rahmat Abad material with data from the preceding sites and other regions, we provisionally call the Pre-Pottery Neolithic of Fars the “Rahmat Abad phase”.

The next occupations at Rahmat Abad are dated from the Mushki phase of the early Pottery Neolithic, with a radiocarbon date of the seventh millennium BC for the uppermost level. The combination of the radiocarbon dates for the Rahmat Abad and the Mushki phases at Rahmat Abad indicates that the transition from the Pre-Pottery to the Pottery Neolithic took place sometime between 7047–6744 cal. BC and 6218–6028 cal. BC. Based on our excavations of Trench G, there was no structural evidence in either the Pre-Pottery or the Pottery Neolithic layers, but what were recovered were fireplaces, small pits and ashy deposits. Whether or not this observation implies a rather ephemeral or seasonal occupation during the earlier Neolithic periods at Tepe Rahmat Abad is yet unknown, given the relatively small excavation areas. However, it is interesting to recall relatively poor structures at the contemporaneous site of Tall-e Mushki,<sup>53</sup> and the far more substantial mud-brick architecture known in the next Pottery Neolithic phase (Jari).<sup>54</sup>

The results of the first two seasons’ excavations show that Rahmat Abad was abandoned at the end of the seventh millennium BC for around 1000 years. This Neolithic mound was then reoccupied at some point during the Early Bakun phase and continued to be occupied in the

<sup>51</sup> Fukai *et al.* 1973.

<sup>52</sup> Azizi Kharanaghi 2012.

<sup>53</sup> Nishiaki 2010a, p. 6.

<sup>54</sup> Nishiaki 2010b, pp. 116–118.

Middle Bakun phase. One of the important activities performed at Rahmat Abad during the Middle Bakun phase was pottery production. Abundant evidence related to industrial activity, including pottery kilns, thick ash deposits, kiln wasters and thousands of pottery sherds was identified. Tepe Rahmat Abad was abandoned once again after the Middle Bakun phase and not reoccupied until the Achaemenid period. The appeal of Rahmat Abad probably lay in its strategic location on the king's road between Pasargadae and Persepolis. The Achaemenid mud-brick structure with a curvilinear plan found in Trench G was probably an official building with a function related to control and monitoring of this route. Evidence related to the most recent occupation at Rahmat Abad belongs to the Islamic Qajar period. In the Qajar period, nomads used the top of the mound as a cemetery. Despite its small size, Rahmat Abad contains rich evidence of a long history of human occupations dating back to the Neolithic times. It should certainly serve as one of the important reference sites by which our understanding of the prehistoric and early historic cultural developments of the region would be greatly improved.

| Material | Cal BC (2 sigma) | Date BP.  | Period             | Context | Trench | Lab no.   |
|----------|------------------|-----------|--------------------|---------|--------|-----------|
| Charcoal | 567–399          | 2415 ± 35 | Achaemenian        | 7015    | G      | TKa-15307 |
| Charcoal | 4945–4763        | 5965 ± 40 | Middle Bakun Phase | 7020    | G      | TKa-15309 |
| Charcoal | 6217–6028        | 7245 ± 45 | Mushki Phase       | 7029    | G      | TKa-15311 |
| Charcoal | 7047–6743        | 7970 ± 45 | Rahmat Abad Phase  | 7032    | G      | TKa-15313 |

Table 4. Radiocarbon dates for different phases of Trench G.

## Bibliography

- Alden, J. R., Abdi, K., Azadi, A., Biglari, F. and Heydari, S.  
2004 “Kushk-e Hezar: A Mushki/Jari period site in the Kur River Basin, Fars,” *Iran* 42: 25–45.
- Alizadeh, A.  
2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun* (The University of Chicago Oriental Institute Publications, 128). Translated by K. Roustaei. Tehran: Parse-Pasargadae Research Foundation.
- Attayi, M. T.  
2005 *Preliminary Report of a Joint Iranian-French Project in the Bolaghi Valley: First Seasons of Excavations at Sites Numbers 85 & 86 and King Road*. Unpublished report in the library of the Iranian Centre for Archaeological Research. Tehran: Iranian Cultural Heritage, Handcraft and Tourism Organization.
- Attayi, M. T. and Boucherlat, R.  
2006 *Preliminary Report of the Second Season of the Joint Iranian-French Salvage Excavation Project in the Bolaghi Valley, Site Number 34*. Unpublished report in the library of the Iranian Centre for Archaeological Research). Tehran: Iranian Cultural Heritage and Handcraft Organization.
- Azizi Kharanaghi, H.  
2009 *Report of the Second Season of Excavation at Tepe Rahmat Abad*. Unpublished report in the library of the Iranian Centre for Archaeological Research. Tehran: Iranian Cultural Heritage and Handcraft Organization.



- 2012 *Report of the First Season of Excavation at Toll-e Qasr-e Ahmad, Kavar*. Unpublished report in the library of the Iranian Centre for Archaeological Research. Tehran: Iranian Cultural Heritage and Handcraft Organization.
- Bernbeck, R., Pollock, S. and Abdi, K.  
2003 "Reconsidering the Neolithic at Tol-e Baši (Iran)," *Near Eastern Archaeology* 66: 76–78.
- Bernbeck, R., Fazeli Nashli, H. and Pollock, S.  
2005 "Life in a fifth-millennium BCE village: Excavations at Rahmat Abad, Iran," *Near Eastern Archaeology* 68: 94–105.
- Bernbeck, R., Abdi, K. and Gregg, M.  
2006 *A Note on the Neolithic of Qara Agaj Valley, Fars Province* (Iranian Centre for Archaeological Research, Archaeological Reports 4). Tehran: Iranian Cultural Heritage and Handcraft Organization.
- Bernbeck, R., Pollock, S. and Fazeli Nashli, H.  
2008 "Rahmat Abad: Dating the aceramic Neolithic in Fars province," *Neo-Lithics* 108: 37–39.
- Delougaz, P. and Kantor, H.  
1996 *Choga Mish*. Vol. 1. *The First Five Seasons of Excavations 1961–1971* (The University of Chicago Oriental Institute Publications, 101). Chicago: Oriental Institute of the University of Chicago.
- Egami, N. and Sono, T.  
1962 *Marv Dasht II: The Excavation at Tall-i Gap, 1959* (Tokyo University Iraq-Iran Archaeological Expedition Report 3). Tokyo: Institute of Oriental Culture, University of Tokyo.
- Egami, N., Masuda, S. and Gotoh, T.  
1977 "Tal-I Jari A: A preliminary report of the excavations in Marv Dasht, 1961 and 1971," *Orient* 13: 1–14.
- Fazeli Nashli, H., Coningham, R. A. E., Young, R., Gillmore, G. K., Magsodi, M. and Valipour, H.  
2007 "Socio-economic transformations in the Tehran Plain: Final season of settlement survey and excavations at Tepe Pardis," *Iran* 45: 267–286.
- Fazeli Nashli, H. and Azizi Kharanaghi, M. H.  
2008 "Stylistics and the relationship between form and motif of Rahmat Abad prehistoric pottery," *University of Tehran, Faculty of Literature and Humanities, Journal* 185(4): 101–124.
- Fazeli Nashli, H., Azizi Kharanaghi, H., Pollock, S. and Bernbeck, R.  
2009 "Relative chronology of Rahmat Abad based on pottery finding," *Nameh Pazhoheshga* 20/21: 59–68.
- Fukai, S., Horiuchi, K. and Matsutani, T.  
1973 *Marv Dasht III: Excavations at Tall-i-Mushki, 1965* (The Tokyo University Iraq-Iran Archaeological Expedition Report 14). Tokyo: Institute of Oriental Culture, University of Tokyo.
- Ghirshman, R.  
1938 *Fouilles de Sialk (Près de Kashan)*. Paris: Musée du Louvre.
- Gotch, P.  
1968 "A survey of the Persepolis plain and Shiraz area," *Iran* 6: 168–170.

Helwing, B. and Seyedin, M.

- 2010 “Bakun-period sites in Darre-ye Bolaghi, Fars,” in *Beyond the Ubaid: Transformation and Integration in the Prehistoric Societies of the Middle East* (Studies in Ancient Oriental Civilization 63), edited by R. A. Carter and G. Philip, pp. 277–292. Chicago: Oriental Institute of the University of Chicago.

Herzfeld, E.

- 1929 “Prehistoric Persia I: A Neolithic settlement at Persepolis. Remarkable new discoveries,” *Illustrated London News*, May 25, 1929.

Hole, F.

- 1977 *Studies in the Archaeological History of the Deh Luran Plain: The Excavation of Chagha Sefid* (Memoirs of the Museum of Anthropology, University of Michigan, 9). Ann Arbor: Museum of Anthropology, University of Michigan.

Kozłowski, S. K.

- 1999 *The Eastern Wing of the Fertile Crescent: Late Prehistory of Greater Mesopotamian Lithic Industries* (BAR International Series 760). Oxford: Archaeopress.

Langsdorff, A. and MacCown, D. E.

- 1942 *Tall-i-Bakun A: Season of 1932* (The University of Chicago, Oriental Institute Publications, 54). Chicago: University of Chicago Press.

Maeda, A.

- 1986 “A study on the painted pottery from Tepe Djari B,” *Bulletin of the Ancient Orient Museum* 8: 55–86.

Marghussian, A. K., Fazeli Nashli, H. and Sarpolaky, H.

- 2009 “Chemical-mineralogical analyses and microstructural studies of prehistoric pottery from Rahmatabad, South-Western Iran,” *Archaeometry* 51(5): 733–747.

Mashkour, M., Mohaseb, A. and Debue, K.

- 2006 “Towards a specialized subsistence economy in the Marvdasht Plain: Preliminary zooarchaeological analysis of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B,” in *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun* (University of Chicago Oriental Institute Publications, 128), edited by A. Alizadeh, pp. 101–105. Chicago: Oriental Institute of the University of Chicago.

Masson, V. M. and Sarianidi, V. I.

- 1972 *Central Asia: Turkmenia before the Achaemenids*. Translated by Ruth Tringham. New York: Thames and Hudson. Original edition, 1969.

Miller, N. F. and Kimiaie, M.

- 2006 “Some plant remains from the 2004 excavations of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B,” in *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun* (University of Chicago Oriental Institute Publications, 128), edited by A. Alizadeh, pp. 107–118. Chicago: Oriental Institute of the University of Chicago.

Nishiaki, Y.

- 2003 *Catalogue of Archaeological Materials in the Department of Archaeology of Western Asia. Part 6: Prehistoric Pottery from the Marv Dasht Plain, Iran* (The University Museum, The University of Tokyo, Material Report, 51). Tokyo: The University of Tokyo.

- 2010a "A radiocarbon chronology for the Neolithic settlement of Tall-iMushki, Marv Dasht Plain, Fars," *Iran* 48: 1–10.
- 2010b "The development of architecture and pottery at the Neolithic settlement of Tall-i Jari B, Marv Dasht, southwest Iran," *Archäologische Mitteilungen aus Iran und Turan* 42: 113–127.
- Pollard, A. M., Davoudi, H., Mostafapour, I., Valipour, H. R. and Fazeli Nashli, H.  
2012 "A new radiocarbon chronology for the Late Neolithic to Iron Age on the Qazvin plain, Iran," *International Journal of Humanities of the Islamic Republic of Iran* 19, no. 3: 1–41.
- Pollock, S., Bernbeck, R. and Abdi, K.  
2010 *The 2003 Excavations at Tol-e Bashi, Iran: Social Life in a Neolithic Village* (Archäologische Iran und Turan, 10). Mainz: Verlag Philipp von Zabern.
- Potts, D. T. and Roustaei, K.  
2006 *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*. Tehran: Iranian Centre for Archaeological Research.
- Sami, A.  
1971 *Pasargadae*. Shiraz: Mousavi Printing Office.
- Sardari, A., Fazeli Nashli, H., Khatib Shahidi, H., Hojabri Nobari, A. and Rezaie, A.  
2012 "Northern Fars in the Bakun period: Archaeological evidence from the Eghlid District," *Archäologische Mitteilungen aus Iran und Turan* 43: 239–260.
- Schmidt, E. F.  
1939 "Tol-e-Bakun: Prehistoric mound near Persepolis," *University of Pennsylvania Museum Bulletin* 7, no. 1: 27–29.
- Stein, M. A.  
1936 "An archaeological tour in the Ancient Persis," *Iraq* 3: 112–225.
- Stronach, D.  
1961 "Excavation at Ras al Amiya," *Iraq* 23: 75–137.
- Sumner, W.  
1990 "Full-coverage regional archaeological survey in the Near East: An example from Iran," in *The Archaeology of Regions: A Case for Full-Coverage Survey* (Smithsonian Series in Archaeological Inquiry), edited by S. K. Fish and S. A. Kowalewski, pp. 87–115. Washington D.C.: Smithsonian Institution Press.  
1994 "The evolution of tribal society in the Southern Zagros Mountains, Iran," in *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity* (Monographs in World Archaeology, 18), edited by G. Stein and M. S. Rothman, pp. 47–65. Madison: Prehistory Press.
- Tsuneki, A. and Zeidi, M.  
2008 *Tang-e Bolaghi, The Iran-Japan Archaeological Project for the Sivand Dam Salvage Area*. Tehran: Iranian Centre for Archaeological Research; Tsukuba: Department of Archaeology, University of Tsukuba.
- Vanden Berghe, L.  
1952 "Archaeologische opzoekingen in de Marv Dasht-vlakte (Iran)," *Jaarbericht Ex Oriente Lux* 12: 212–220.  
1954 "Archaeologische navorsingen in de omstreken van Persepolis," *Jaarbericht Ex Oriente Lux* 13: 394–408.

Voigt, M. and Dyson, R. H.

1992 “The Chronology of Iran, ca. 8000–2000 B.C.,” in *Chronologies of Old World Archaeology I & II*, edited by R. W. Ehrich, pp. 122–178, 125–153. Chicago: University of Chicago Press.

Weeks, L., Alizadeh, K., Niakan, L., Alamdari, K., Zeidi, M., Khosrowzadeh, A. and McCall, B.

2006 “The Neolithic settlement of Highland SW Iran: New evidence from the Mamasani District,” *Iran* 44: 1–31.

Weeks, L.

2013 “The development and expansion of a Neolithic way of life,” in *The Oxford Handbook of Ancient Iran*, edited by D.T. Potts, pp. 49–75. Oxford. Oxford University Press.

Weeks, L., Petrie, C. A. and Potts, D. T.

2010 “Ubaid-related-related? The ‘black-on-buff’ ceramic traditions of highland southwest Iran,” in *Beyond the Ubaid: Transformation and Integration in the Prehistoric Societies of the Middle East* (Studies in Ancient Oriental Civilization, 63), edited by R. A. Carter and G. Philip, pp. 245–276. Chicago: Oriental Institute of the University of Chicago.

Zareh, M., Ebrahimi, S. and Abolahrar, A.

2011 *Primary Report of Miyan Rod Second Seasons Excavation*. Unpublished report in the library of the Iranian Centre for Archaeological Research. Tehran: Iranian Cultural Heritage and Handcraft Organization.

Hossein AZIZI KHARANAGHI

University of Tehran

E-mail: hossinazizi@yahoo.com

Hassan FAZELI NASHLI

University of Tehran, University of Reading

E-mail: h.fazelinashli@reading.ac.uk

Yoshihiro NISHIAKI

University of Tokyo

E-mail: nishiaki@um.u-tokyo.ac.jp



# Excavation at Kul Tepe (Hadishahr), North-Western Iran, 2010: First Preliminary Report

Akbar ABEDI, Hamid Khatib SHAHIDI, Christine CHATAIGNER, Kamalaldin NIKNAMI,  
Nasir ESKANDARI, Mehdi KAZEMPOUR, Alireza PIRMOHAMMADI, Javad HOSSEINZADEH and  
Ghader EBRAHIMI

## Abstract

*The site of Kul Tepe is located near the city of Hadishahr, is an ancient multi-period tell about 6 ha in extent and rises 19 m above the surrounding land. At this site, the first season of archeological excavation primarily aimed to clarifying the chronology, settlement organization, and respond to some of the fundamental questions such as the transition process from Late Chalcolithic to Early Bronze Age, identifying different cultural horizon including Proto-Kura-Araxes and Kura-Araxes I period and also outlining cultural condition of the region during prehistoric and historic periods. The present paper is intended to expose briefly the main stratigraphic, architectural and material data from the site. Based on the results of the first season of excavation, it was distinguished that Kul Tepe possessed cultural material from Early Chalcolithic (Dalma), Late Chalcolithic (Pisdeli=LC1; LC2 and 3=Chaff-faced Ware), Proto-Kura-Araxes and Kura-Araxes I, Early, Middle, Late Bronze Age, Iron III, Urartian and Achaemenid periods. The accomplished studies showed that Kul Tepe passed through a transitional phase between Chalcolithic and Bronze Age and then it entered into Kura-Araxes I, II and III that contain traces of Early Bronze Age.<sup>1</sup>*

**Keywords:** Kul Tepe, Northwestern Iran, Excavation, Preliminary Report

## INTRODUCTION

The site of Kul Tepe (E 45° 39' 43"– N 38° 50' 19", 967 m asl; Figs. 1: 1–2, 2) is located near the city of Hadishahr, 10 km further to the south of the Araxes River. Kul Tepe is a multi-period mound about 6 ha in extent and rising 19 m above the surrounding land. The site was originally discovered by an expedition to the East Azerbaijan province in 1968 under the supervision of Kambakhsh Fard,<sup>2</sup> and was later reported by Kliess and Kroll, Kroll, Edwards and Omrani.<sup>3</sup> Kul

<sup>1</sup> The first season of excavation at Kul Tepe was carried out by financial support of Eastern Azerbaijan branch of ICHHTO, Aras Free Zone Organization of Jolfa and Iranian Center for Archaeological Research (ICAR). We would like to thank Mr. Torab Mohammadi, Dr. Behrooz Omrani (ICHHTO of Eastern Azerbaijan), Dr. Najafzadeh and Mehdi Abbasi deputy of Cultural, Social and Tourism affair at Aras Free Zone. I would also like to thank Dr. Nobari, A. Javanmardzadeh, B. Golizadeh, H. Egbal, S. Saediyan, M. Khazaei, M. Alizadeh and S. Noori for their contribution to excavation project. Special thanks go to Mr. Hossein Abedi for logistical support. Finally we are sincerely grateful to Antonio Sagona for his many detailed comments and suggestions for improving the text, and to Abby Robinson for copyediting our paper.

<sup>2</sup> Kambakhsh Fard 1968.

<sup>3</sup> Kliess and Kroll 1992; Kroll 1984; Edwards 1986; Omrani 1994.

Tepe is located precisely in the northwestern corner of Iran which represents the gateway between the Southern Caucasus and northwestern Iran. It is about 50 km from the famous site Kültepe of Nakhichevan. Kul Tepe is located next to a broad valley, at the core of the highlands and the crossroads of major routes linking the Iranian plateau to Anatolia and the Caucasus to Northern Mesopotamia (Fig. 1: 2). This strategic location is further enhanced by the region's wealth in natural resources, which include rich copper and salt deposits.

#### ARCHAEOLOGICAL BACKGROUND OF NORTHWEST IRAN

Long-term archaeological investigations in northwestern Iran started with excavations at the prehistoric site of Yanik Tepe in eastern Lake Urmia, directed by Charles Burney,<sup>4</sup> and continued at other sites such as Hasanlu in the western Lake Urmia region, directed by Robert Dyson, Hajji Firuz, Dalma and Pisdeli.<sup>5</sup> Studies subsequent to these early excavations led to identification of the Late Neolithic period in Hajji Firuz (sixth millennium BC), previously regarded as belonging to the cultural horizon of Hassuna in Mesopotamia.<sup>6</sup> Chalcolithic cultural material excavated at Dalma (5000–4500 BC) was also comparable with that of the Halaf and Ubaid cultures in southern Mesopotamia.<sup>7</sup> The Dalma period was followed by Pisdeli Culture (4500–3900/3800 BC), which was contemporaneous with the Late-Ubaid/Post-Ubaid horizon. Geoy M/Gijlar C culture (4000–3500 BC) is the final phase of the Chalcolithic period in northwestern Iran, excavated and reported from Gijlar, Geoy M and Trench M at Yanik Tepe.<sup>8</sup> The material culture Yanik (Kura-Araxes), which takes its name from a Bronze Age site of Yanik Tepe, belongs to the Early Trans-Caucasian or Kura-Araxes culture (second half of the fourth to end of the third millennium BC), which spread through the Caucasus and the Urmia Basin. Its origin is unknown, but it has been observed in the valleys and foothills of three Caucasian republics (Azerbaijan, Armenia and Georgia), as well as northwestern and western Iran, eastern Anatolia and the Levant.<sup>9</sup> During the final phase of prehistory in northwestern Iran, this region experienced the Middle and Late Bronze Age culture (2200/2000 to 1500 BC) known as Urmia Ware, including painted monochrome and polychrome pottery. In the first half of the second millennium BC Urmia Ware extended over the Urmia Basin and has been found in Haftavan VIB.<sup>10</sup> Despite the general similarity between Urmia Wares, different regional names are used; for example, in eastern Georgia pottery of this type is known as Trialeti-Vanadzor culture, in Azerbaijan as Uzarlik culture, and in Armenia as Karmirberd-Sevan culture.<sup>11</sup>

In addition to the abovementioned projects in northwestern Iran, other excavations and surveys carried out during recent decades in the Lake Urmia Basin included Geoy Tepe, Kordlar

<sup>4</sup> Burney 1961a, 1961b, 1962, 1964; see also Summers 2013b.

<sup>5</sup> Dyson 1965, 1968, 1972, Dyson and Muscarella 1989 (Hasanlu); Voigt 1983 (Hajji Firuz); Hamlin 1975 (Dalma); Dyson and Young 1960 (Pisdeli).

<sup>6</sup> Voigt 1983.

<sup>7</sup> Oates 1983.

<sup>8</sup> Helwing 2004.

<sup>9</sup> Sagona 1984; Kushnareva 1997; Rothman 2003; Kohl 2007; Abedi *et al.* 2009.

<sup>10</sup> Edwards 1981, 1983, 1986.

<sup>11</sup> Smith *et al.* 2009 (Georgia); Kushnareva 1986 (Azerbaijan); Abedi *et al.* 2009 (Armenia).

Tepe, Tepe Dinkha, Haftavan Tepe, Tepe Ahranjan, Tepe Gijlar, Kul Tepe of Marand, and Gol Tepe.<sup>12</sup> In addition, surveys were undertaken in northwestern Iran, the Salmas valley and the Solduz plain, around Lake Urmia (by a German team) and in the Meshkin Shahr area.<sup>13</sup> Since the 1979 Revolution in Iran, archaeological research has included Early Bronze Age settlement patterns and site distribution in northwestern Iran, survey in Eastern Azerbaijan province, systematic survey at Tepe Baruj and the Mughan plain, and excavations at Lavin Tepe, Nader Tepesi, Qosha Tepe in the Meshkin Shahr area, Kohne Pasghah Tepesi, the Iron Age cemetery of Masjed Kabood in Tabriz, Qale Khosrow and Ardebil Survey, Qalaychi and Tepe Rabat, Zardkhaneh of Ahar, and Köhne Shahar (Ravaz).<sup>14</sup> Apart from these excavations and surveys, there have also been many others that have yet to be published.

The main problems for archaeology in northwestern Iran are a lack of systematic and intensive excavations and surveys and a shortage of reliable publications, as well as inaccurate and uncalibrated dating of old excavations and a shortage of multidisciplinary works. During recent years, most excavations in northwestern Iran took place in the course of salvage and dam archaeological projects. In this present paper we will try to briefly describe the main stratigraphic, architectural and material data from Kul Tepe Hadishahr.

## FIELD METHODOLOGY

Prior to excavation, the site and parts of the sounding area were surveyed and mapped, and a grid system of 10 × 10 m squares was superimposed on the site (Fig. 2). One of the first things we did was try to track occupation by looking at the distribution of potsherds in different parts of the site, while also selecting the best places for soundings. Excavations at Kul Tepe were conducted from June to August 2010 (70 days of fieldwork). The initial aims were to establish the periods of occupation and to obtain a stratigraphically controlled ceramic sequence for the Jolfa region and the northern part of northwestern Iran. More specifically, Kul Tepe was excavated for two main reasons:

- 1) To determine the presence of Late Chalcolithic followed by Early Bronze Age occupation levels
- 2) More importantly, to test for the presence of a probable “transition” period between the Late Chalcolithic and Early Bronze Ages and the existence of Proto-Kura-Araxes and Kura-Araxes I periods.

<sup>12</sup> Burton-Brown 1951 (Geoy Tepe); Kromer and Lippert 1976, Lippert 1976 (Kordlar Tepe); Dyson 1967a, Hamlin 1974 (Tepe Dinkha); Burney 1970a, 1970b, 1972, 1973, 1974, 1975, 1976a, 1976b, 1979a, Edwards 1981, 1983, 1986 (Haftavan Tepe); Taláí 1983 (Tepe Ahranjan); Pecorella and Salvini 1984, Belgiorio *et al.* 1984 (Tepe Gijlar); Kroll 1990 (Kul Tepe of Marand); Taláí 1984 (Gol Tepe).

<sup>13</sup> Kambakhsh Fard 1967, Soleki 1969, Soleki and Soleki 1973, Swiny 1975, Pecorella and Salvini 1984 (northwestern Iran); Kearton 1969, 1970 (Salmas); Dyson 1967b (Solduz); Kleiss and Kroll 1979, 1992, Kroll 1984, 2005 (Lake Urmia); Burney 1979b, Ingraham and Summers 1979 (Meshkin Shahr).

<sup>14</sup> Omrani 2006, Omrani *et al.* 2012, Summers 2013a (northwestern Iran); Khatib Shahidi and Biscione 2007, Biscione and Khatib Shahidi 2006 (Eastern Azerbaijan); Alizadeh and Azarnoush 2003a, 2003b (Tepe Baruj); Alizadeh and Ur 2007 (Mughan plain); Nobari *et al.* 2012 (Lavin Tepe); Alizadeh 2007 (Nader Tepesi); Nobari and Purfaraj 2005 (Qosha Tepe); Maziar 2010 (Kohne Pasghah Tepesi); Nobari 2000 [1379], 2004 [1383] (Masjed Kabood); Azarnoush *et al.* 2006 (Qale Khosrow and Ardebil Survey); Kargar 2005, Kargar and Binandeh 2009 (Qalaychi and Tepe Rabat); Niknami 2011 (Zardkhaneh of Ahar); Alizadeh in press (Köhne Shahar).

Excavations of Kul Tepe were conducted in three trenches across the site: Trench I, opened on the southern part of the mound; and Trenches II and III on the northern slope of the mound. Trenches I and II were small (*ca.* 2 × 2 m) stepped trenches (Figs 3, 4), and Trench III was a 2 × 2 m deep trench (Fig. 4).

Trench I is a 2 m-wide step trench oriented south-north along the southern slope of the mound. Six steps were made during the first season of excavation. Thirteen metres of excavations revealed Early, Middle and Late Bronze Age, Iron III, Urartian and Achaemenid levels. Everything below the 8 m mark contained Early Bronze Age materials. We were unable to reach virgin soil in Trench I (Fig. 3). Trench II was located on the rough 15 m-high section which had been created by bulldozing into the northern slope of the mound. It is a 2 m-wide step trench oriented south-north and continues as Trench III, a 2 × 2 m deep sounding. Finally, with eight steps Trench II reached the surface of Trench III. The sequence of the site comes from the step trench, II, and deep trench, III, which covered a very reliable 24 m stratigraphic sequence for the site (Fig. 4).

All identified finds, artefacts, and faunal remains were collected and retained. Environmental sampling during the evaluation targeted a representative range of contexts from each phase and focused on contexts with high potential for botanical survival. The site code Kul.T.J.2010 has been allocated to all work undertaken after the excavation. This code will be used to label all recording sheets, plans and finds. All archaeological finds from the excavations remain at the Kul Tepe Archaeological Project's camp in Hadishahr.

The design of the notebook is shown in Fig. 5. Each locus is recorded on two double-sided sheets of paper which contain the core elements of all facets of daily work, starting with a brief description of conditions — temperature, light, heat, and wind (which provide researchers with an idea of conditions that might affect data recording), excavation strategy and the loci being excavated. Separate columns are included for initial plans of features and architecture, and (X, Y, Z) dimensions of all structures and loci. Space is provided for a brief explanation of each locus and feature, and there are special boxes for registering all samples collected during excavation (radiocarbon, flotation, micro-morphology, small finds, pottery, bone, lithic, et cetera). The stratigraphic relationship of each locus in relation to surrounding loci is also noted, following the principles of the Harris Matrix. All daily trench/or loci photographs and drawn plans are sorted and processed in AutoCAD and Adobe Photoshop.

Pottery evaluation is perhaps the single most important aspect of finds analysis, because it provides the chronological framework for everything else. To prepare pottery for “reading” we laid the washed and dried sherds on tables with the diagnostics (rims, bases, handles, and sherds with decoration or form) separated from the non-diagnostics (generally plain body sherds). The field or square supervisor was responsible for recording the pottery readings.

Following this preliminary sorting and processing, all of the pottery was stored for further laboratory analysis. Post-excavation laboratory analyses will include drawing, measurement (primarily rim and base profiles) and description (form and fabric) of each artefact so that a quantitative categorisation of the technological, functional and chronological attributes of the material will be possible. Once the ceramic material has been classified and sorted into stylistically defined typologies, samples will be selected for petrographic and chemical characterisation studies, with the aim of identifying discrete fabric or ware groups, their possible sources of origin (local or otherwise), manufacturing techniques, and the organisation of the local ceramic industry. This information will help to determine the level of integration that existed within and between communities.

## KUL TEPE: STRATIGRAPHY AND SEQUENCE

The first season of excavation established eight main occupation periods so far. They correspond to the Early, Middle and Late Chalcolithic, Early, Middle and Late Bronze Age, Iron III, Urartian and Achaemenid periods<sup>15</sup> (Fig. 6).

| Kul Tepe Periods | Period  | Date cal BC                                |
|------------------|---|--|
| Kul Tepe VIII    | Early Chalcolithic (Dalma)                    | 5000–4500/4400                             |
| Kul Tepe VII     | LC1: Pisdeli/Hasanlu VIII = Post-Ubaid period | 4500/4400–4300/4200                        |
| Kul Tepe VIB     | LC2: Chaff-Faced/Chaff-Tempered               | 4300/4200–4000/3900                        |
| Kul Tepe VIA     | LC3: Chaff-Tempered                           | 4000/3900–3700/3600                        |
| Kul Tepe V       | Kura-Araxes I                                 | 3700/3600–3200/3100                        |
| Kul Tepe IV      | Kura-Araxes II, III (Early Bronze Age)        | 3200/3100–2300/2200                        |
| Kul Tepe III     | Middle Bronze Age (Urmia Ware)                | First half of 2 <sup>nd</sup> mill.        |
| Kul Tepe II      | Iron III, Urartian                            | 8 <sup>th</sup> –6 <sup>th</sup> centuries |
| Kul Tepe I       | Achaemenid                                    | 6 <sup>th</sup> –4 <sup>th</sup> centuries |

Fig. 6. Sequence of Kul Tepe According to 2010 Excavation.

#### 1. Kul Tepe VIII (5000–4500 BC): Early Chalcolithic (Dalma)

The lowermost and earliest layers of Kul Tepe, which cut down into the sedimentary virgin soil (at a depth of 8.3 m) are related to the Early Chalcolithic period, known as the Dalma/Hasanlu IX period in northwestern Iran's chronological table. According to the stratigraphic section in Trench III, three metres at Kul Tepe related to this period (Fig. 4).

##### Buildings

Only one architectural phase and structure was brought to light in these layers, at a depth of 7.5 m from the radix point of Trench III. It is a circular and semi-subterranean building made of *pisé* and about 2 m in diameter. The width of this wall is 20 to 25 cm and it seems to be a semi-subterranean building, used during this period (Fig. 7:1).

##### Ceramics

A total of 189 pot sherds were recovered from the Early Chalcolithic layers in Trench III.

**Manufacture:** All the pottery is hand made.

**Inclusions:** The pottery is characterised by chaff (14=7.5%) and mixed (175=92.5%) temper.

**Firing:** Well fired: 87(=46.03%); under-fired: 102(=53.97%)

<sup>15</sup> Abedi 2011; Khatib Shahidi and Abedi 2011.



**Colour range:** The surface colour is generally characterised by a whitish/yellowish slip (10YR 8/2, 8/3) on the external surfaces. The range is from greyish brown to pink, but the most common colours are shades of very pale brown, pink and reddish yellow. More specifically, the hue of the Dalma Sherds of Kul Tepe falls on Munsell colour charts 5YR, 7.5YR and 10YR.<sup>16</sup> The core of the wall is dark, ranging from grey to very dark grey.

**Surface treatment:** There are three major categories of surface treatment: (1) painted (Figs 8: 1–9; 9: 3–4, 7–8, 10: 1–9), (2) red-slipped (Figs 9: 9; 10: 10), and (3) plain (Figs 9: 1, 5–6, 10: 10: 11–12). The surface-manipulate type (Dalma Impressed) is completely absent in the Dalma assemblage of Kul Tepe (Figs 9–10). Most of the vessels of this period have burnished exteriors (93=49.2%), and some have burnished interiors (85=44.97%) as well. Wet-smoothing (ext. 2=1.05%; int. 2=1.05%) was used to finish the exterior and interior surfaces of the vessels. Wet-smoothed surfaces are matte and have fine ridges as well as fingerprints; the surface was therefore wiped with the hand while it was wet or plastic. Other examples have no surface treatment (ext. 17=8.99%; int. 17=8.99%).

**Decoration:** Three types of decorative techniques were used: thin paint or wash over the entire surface (wash: ext. 63=33.33%, int. 67=35.44%; slip: ext. 14=7.40%; int. 18=9.52%); geometric design; and incising. Among the decorated sherds, geometric painted pottery (42=22.22%), sherds with grooved and incising design (9=4.76%), and excised decoration (2=1.05%) are predominant, but the majority of sherds are undecorated (136=71.97%). Brown and black paint was used to apply geometric designs on the exterior surfaces of the vessels. Usually a thin band of paint is applied around the top of the rim (Figs 8–10). The painted designs are made up of large geometric elements arranged on vertical axes and repeated in sequence around the vessel wall. The designs are all linear, and include chevrons (Figs 8: 1; 10: 8), parallel oblique lines (Figs 8: 4, 6–9; 10: 1, 5–6), parallel lines (Fig. 10:2), diagonal (Fig. 8:1), crosshatched triangles (Figs 9: 3–4, 7) and plaid (Fig. 10: 4). In a rare sample the pattern seems like abstract animal design (Fig. 8: 5).

**Principle shapes:** Major forms and types of pottery include: bowls (Figs 9: 1–2, 10: 10–11), holemouth open bowls (Figs 8: 1, 2, 8–9; 10: 1), large open shallow bowls (Fig. 9: 9), cups (Fig. 8: 4), jars with everted rim and short neck (Figs 8: 5–7; 10: 7–8) and small jarlet (Fig. 10: 2).

## Lithics

Almost all the lithic industry of this period in Kul Tepe is in obsidian, though there are rare flint and chert pieces. Obsidian was brought to Kul Tepe in the form of nodules, blocks, and blanks and processed locally, as suggested by numerous waste and core fragments. A lot of tools are found; for example, flakes, blades, scrapers, borers and points. Many sickle blades, displaying gloss on one edge, are present. Utilised flakes and blades as well as side-scrapers and sickle blades appear with greatest frequency in *chaîne opératoire* of Kul Tepe.

<sup>16</sup> The colours of the monochrome ware ranged from red (10R 6/8; 2.5YR 6/6, 6/8; 5YR 6/4, 6/6; 7.5YR 7/6) (ext. 74=39.15%; int. 75=39.64%), grey (7.5YR 6/1, 5/1, 7/1; 5YR 6/1, 7/1) (ext. 47=24.8%; int. 54=28.6%) and buff (10YR 6/3, 6/4, 7/2, 7/3, 8/3, 8/4) (ext. 30=15.90%; int. 17=9%), to pink (2.5YR 6/4, 6/6, 6/8; 5YR 6/6, 6/8, 7/6, 7/8; 7.5YR 7/6, 7/8) (ext. 19=10.1%; int. 21=11.11%), brown/reddish brown (2.5YR 5.6; 5YR 5/1, 5/2, 5/3, 5/4, 7/6; 7.5YR 5/2, 5/3, 5/4) (ext. 17=9%; int. 20=10.6%) and plum (10R 3/6) (ext. 2=1.05%; int. 2=1.05%).

### Other artefacts

Bone and ground stone artefacts are found only rarely in this period. Because of the limited excavation area, only one bone awl and one pestle were brought to light. One of the interesting findings of this period is three clay objects of unknown application, although it seems they may be something like figurines (Fig. 11: 1).

## 2. Kul Tepe VII, VIB and VIA: Late Chalcolithic: Introduction

Interestingly, Voigt and Dyson, based on Pisdeli Tepe materials and site sequence, suggested a transition between the Dalma and Pisdeli periods with no time gap between them. They proposed a local development for Pisdeli culture.<sup>17</sup> The Kul Tepe excavation supports this case. Late Chalcolithic layers were discovered in the deep sounding, Trench III, without any gap after the Dalma materials. According to pottery type, form, design and surface treatment and the sequence in which they occur, and to other Late Chalcolithic materials of Kul Tepe, three sub-phases have been identified: Kul Tepe VII=Pisdeli (LC1=Post-Ubaid), Kul Tepe VIB= LC2 (Chaff-faced/Chaff-tempered), and Kul Tepe VIA=LC3 (Chaff-tempered) cultures.

### 2.1 *Kul Tepe VII (4500–4200 BC) (Pisdeli= LC1 Post-Ubaid)*

The lowermost layers of the Late Chalcolithic (LC1, Post-Ubaid: 4500–4200 BC) include black-on-buff so-called Pisdeli type painted pottery. The stratigraphic section in Trench III indicates that 1.5 to 2 m of Kul Tepe deposits relate to Period VII (LC1) (Figs 4, 6). According to C14 absolute radiocarbon dating, a date around 4500–4200 BC for Period VII at Kul Tepe is suggested.

### Buildings

One architectural phase was recovered from this period. It is rectangular and mud brick with a stone foundation (1.3 m × 80 cm) and was found at a depth of 4.2–4.6 m from the radix point of Trench III. Only parts of the structure were revealed, in the northern and southwestern parts of the trench. The foundation of the structure was formed of irregular stones. No regular mud bricks with clear dimensions were identified (Fig. 7: 2).

### Ceramics

A total of 387 potsherds were recovered from the Period VII (LC1) layers in Trench III.

**Manufacture:** The great majority of the pottery is hand made (383=98.9%).

**Inclusions:** The fabric is characterised by chaff (49=12.7%), mixed (331=85.5%) and grit (7=1.8%) temper; in chaff-tempered cases, the chaff is fine to medium, which invariably produces a chaff-faced effect.

<sup>17</sup> Voigt and Dyson 1992, p. 174.

**Firing:** Well fired: 182(=47.02%); under-fired: 205(=52.98%)

**Colour range:** The pottery is mostly buff coloured. The colours of the monochrome ware range from pink, grey and buff, to red, black/blackish, light grey, plum and blackened.<sup>18</sup> The section can be monochrome (brown or buff) but in some cases it shows grey cores.

**Surface treatment:** Most of the vessels of this period have wash exteriors (254=65.65%), and some others are burnished on the interior (246=63.56%) as well. Burnished (ext. 16=4.13%; int. 21=5.42%) and slip (ext. 27=6.97%; int. 27=6.97%) treatment is also applied. Wet-smoothing (ext. 10=2.58%; int. 9=2.35%) was used to finish the exterior and interior surfaces of the vessels. Other vessels have no surface treatment (ext. 80=20.67%; int. 84=21.7%).

**Decoration:** Sherds with grooved (42=10.85%) and incised designs (5=1.29%), geometric painted pottery (13=3.36%) and excised decoration (17=4.4%) are predominant amongst the decorated sherds in the assemblage, but most of the sherds are undecorated (310=80.1%) (Figs 12–15). This pottery repertoire is almost completely limited to geometric or nonrepresentational designs (Figs 12–15). Emphasis is on horizontal banding by means of straight lines, which may border some design elements. All the painted pottery of this period shows a monochrome and matte paint. The paint colours range from brown to black. Generally, painting is limited to bowls and small pots. Most of the pottery of Late Chalcolithic of Kul Tepe consist of chaff tempered fabric in buff to reddish color (Figs 12: 5; 15: 1–4). All of the painted sherds are painted black and brown on buff, brown and red (reddish-brown), include geometric design such as oblique and diagonal lines under the rim (Figs 12: 1–2). Other diagnostic design is hatched and plaid in jars and bowls (Fig. 14: 3, 7).

**Principle shapes:** Nine categories are distinguished during period VII=LC1: bowls (Figs 12: 4–5; 14: 3; 15: 4), bowls with knob decoration under the rim (Figs 13: 1–2, 4; 15: 3), jars (Figs 12: 2, 6; 14: 2; 15: 1), jars with knob decoration under the rim (Figs 13: 3; 15: 3); jars with everted rims and short neck (Figs 12: 1, 3; 15: 2), one-handle jars (Figs 12: 7; 14: 5–6, 8), jars decorated with an annular coil around the shoulder (Figs 14: 1–2; 15: 5–6), shallow trays (Figs 12: 8; 15: 7–8) and comb design vertical bases (Fig. 13: 10). Bowls and jars are most numerous in all strata.

## Lithics

Like the preceding Kul Tepe VIII, during Period VII obsidian lithic artefacts again constitute the main part of the *chaîne opératoire*. Almost all the lithic industry of this period in Kul Tepe is in obsidian (more than 95%). Utilised flake and blade is the most common tool in the assemblage. Bone and grinding materials (pestles, mortar, *etc.*) constitute other objects in the assemblage.

<sup>18</sup> Pink (7.5YR 7/3, 7/4, 8/2, 8/3, 8/4; 5YR 7/3, 7/4, 7/6) (ext. 173=44.71%; int. 199=51.42%), grey (10YR 6/1, 6/2; 7.5YR 5/1, 6/1, 7/1; 5YR 6/1, 7/1) (ext. 109=28.2%; int. 117=30.2%) and buff (7.5YR 8/2, 8/3; 10YR 6/2, 6/3, 7/2, 7/3, 8/2, 8/3, 8/4) (ext. 78=20.15%; int. 52=13.6%), to red (10R 6/8; 2.5YR 6/6, 6/8; 5YR 6/4, 6/6) (Ext. 13=3.35%; Int. 12=3.1%), black/blackish (5YR 2.5/1; 7.5YR 2.5/1; 10YR 2/1) (ext. 3=0.77%; int. 2=0.51%), light-grey (2.5Y 7/2) (ext. 2=0.51%; int. 1=0.25%), plum (10R 3/6) (ext. 1=0.25%; int. 1=0.15%) and blackened (ext. 8=2.06%; int. 3=0.77%).

## 2.2 *Kul Tepe VIB and VIA: Introduction*

Two main periods can be distinguished, mainly based on ceramic evidence but supported by additional information from other kinds of artefacts. They are LC2= Chaff-faced Ware: 4200–3900 BC, termed Kul Tepe VIB, and LC3=Chaff-faced Ware: 3900–3700, termed Kul Tepe VIA. According to the stratigraphic section in Trench III, there are 6 m of deposits related to Kul Tepe Periods VIB (LC2) and VIA (LC3) (Fig. 4).

The chronological framework presented here is based on three lines of evidence:

- 1) Rim and decoration typology (embedded within the stratigraphic sequence)
- 2) Pottery technology
- 3) Radiocarbon dates.

### Ceramics

Late fifth-millennium Chaff-faced or Chaff-tempered ware appears alongside Ubaid-related black on buff during LC2–3.<sup>19</sup> In the later phase of the Chalcolithic, most of the pottery production is buff, chaff-tempered and chaff-faced. The shape repertoire mainly consists of simple everted bowls, pots and jars, sometimes decorated with a row of knobs below the rim or an annular coil around the shoulder. Rims decorated with incisions or perforations are common to most pottery of this LC2 and 3 type at Kul Tepe (Figs 17–22).

Chaff-faced and chaff-tempered pottery with combed surfaces is typical of the Late Chalcolithic of Southern Azerbaijan in general and the Nakhichevan region and northwestern Iran in particular, where it has been termed “Kültepe culture”. Similar pottery was found at Kültepe I, Khalaj, Erebyengicesi, Sederek, Kul Tepe of Marand, Tepe Baruj and Tepe Dava Göz Khoy.<sup>20</sup> But close comparisons may also be made over a much wider area which includes Eastern Anatolia, the Urmia Basin and Northern Mesopotamia, where similar traits are designated as part of the “Marand culture” in Iran,<sup>21</sup> or “Chaff-faced ware culture”, also called “Amuq (E)-F”, in Turkey and Northern Syria.<sup>22</sup> However, if we focus on the main features of the pottery assemblage from Kul Tepe, it is clear that this repertoire shares close similarities with sites located in the northern parts of the Araxes River, especially sites like Ovçular Tepesi, Kültepe, Alikömek Tepesi, Mentesh Tepe and Leila Tepe in Azerbaijan, Sioni and most related sites in Georgia, Aratashen in Armenia, and some sites in eastern Turkey and northern Mesopotamia.

### Lithics

Most of the lithic artefacts from Late Chalcolithic of Kul Tepe are made of obsidian. Almost all of the lithic industry of this periods is obsidian (more than 90%), although there are some rare chert/flint specimens. The number of utilised flakes increased during this period, although

<sup>19</sup> Helwing 2012.

<sup>20</sup> Bakhshaliyev *et al.* 2009, Marro *et al.* 2011 (Kültepe I, Khalaj, Erebyengicesi, Sederek); Kroll 1990 (Kul Tepe of Marand); Alizadeh and Azarnoush 2003b (Tepe Baruj); Abedi 2012; Abedi and Omrani 2013 (Tepe Dava Göz Khoy).

<sup>21</sup> Kroll 1994.

<sup>22</sup> Braidwood and Braidwood 1960.

artefacts like the utilised blade, utilised bladelet, notch, denticulate, side-scraper, end-scraper, burin, point, and sickle blades have also been used.

### 2.2.1 Kul Tepe VIB (LC2= Chaff-faced Ware) (4200–3900 BC)

#### Buildings

Two architectural phases belonging to LC2 and 3 were uncovered during the excavation in Trench III. They are two rectangular mud-brick structures, identified at a depth of 2.2 m from the radix point of Trench III. One of these structures is rectangular, measuring 1.3 × 1 m, and extending roughly northwest-southeast. This structure includes mud bricks with the dimensions 55 × 35 × 10 cm. They are in three rows and reach to the southern section of the trench but do not describe a particular shape (Fig. 16: 1). It is obvious that in such narrow trenches possible vestiges of architecture may be traced only in a very limited manner. The fragmentary state of the various remains makes it difficult to interpret architectural features, and consequently the artefacts found within them, at their true value.

#### Ceramics

A total of 620 potsherds were recovered from Period VIB (LC2) layers in Trench III.

**Inclusions:** All of the pottery is hand made and characterised by chaff (44=7.09%), mixed (568=91.6%) and grit (8=1.31%) temper. In chaff-tempered cases, the fabric is tempered with fine to medium chaff, which invariably produces a chaff-faced effect.

**Firing:** Well fired: 338(=54.51%); Under-fired: 282(=45.49%)

**Colour range:** The pottery is mostly buff coloured. The colours of the monochrome ware range from pink, grey, red and buff, to black/blackish, brown and light brown, and blackened.<sup>23</sup> The section can be monochrome (brown, reddish-brown and buff) but in most cases it shows grey core.

**Surface treatment:** Most of the sherds have a slip treatment (ext. 380=61.3%; int. 385=62.1%), although a wet-smoothed (ext. 9=1.45%; int. 5=0.80%) surface that has been treated with either an orange or a brown wash (ext. 69=11.13%; int. 70=11.29%) and a burnished surface (ext. 85=13.7%; int. 86=13.87%) was applied in most cases. Other sherds have no surface treatment (ext. 77=12.42.67%; int. 74=11.94%). One of the important findings was signs of bitumen on the interior surfaces of vessels. The impression made by a woven mat on the exterior surface of vessels is another finding of Period VIB in Kul Tepe. In this assemblage combed pottery is typical, where the surface, before firing, has been scraped with a brush or a comb-like tool (Figs 17: 3, 8; 18: 4, 6; 19: 5; 20: 14; 21: 14; 22: 11). In the case of excised decoration, circular or oval knobs have usually been applied below the rim of bowls and jars (Fig. 20: 1).

<sup>23</sup> Pink (10 YR 7/4; 7.5YR 7/3, 7/4, 8/2, 8/3, 8/4; 5YR 6/3, 7/3, 7/4, 7/6, 8/3, 8/4) (ext. 237=38.25%; int. 261=42%), grey (10YR 6/1, 6/2; 7.5YR 5/1, 6/1, 7/1; 5YR 5/2, 6/1, 7/1, 7/2, 8/1) (ext. 235=37.9%; int. 242=39.08%), red (10R 6/8; 2.5YR 6/6, 6/8; 5YR 6/4, 6/6; 7.5YR 7/6; 2.5 YR 5/6, 6/8) (ext. 71=11.45%; int. 60=9.7%) and buff (2.5 YR 7/4; 7.5YR 8/2, 8/3; 10YR 6/2, 6/3, 7/2, 7/3, 8/3, 8/4) (ext. 53=8.54%; int. 37=5.96%), to black/blackish (5YR 2.5/1; 7.5YR 2.5/1; 10YR 2/1) (ext. 6=0.96%; int. 8=1.3%), brown and light-brown (5YR 4/3) (ext. 1=0.16%; int. 1=0.16%) and blackened (ext. 17=2.74%; int. 11=1.8%).



**Decoration:** Of the decorated pottery from this period, sherds with comb and groove design (133=21.45%) and excised (12=1.93%) and incised designs (5=0.80%), as well as geometric painted pottery (1=0.16%) are predominant in the assemblage, but most of the sherds are undecorated (469=75.66%) (Figs 17–22).

**Principle shapes:** Unfortunately, due to the limitations of the 2 × 2 m sounding trench, few complete wares were brought to light and mainly sherds were collected for this period. Open and closed shapes are both present, and among the open ones, hemispherical bowls seem to be the most common form. Together with the hemispherical bowls, pierced jars are probably the most typical shape of the LC2 in the Kul Tepe repertoire; they are characterised by a row of small holes running immediately below the rim (Figs 17: 6; 20: 14; 21: 8; 22: 8). A globular jar with knobbed or annular decoration in relief, sometimes arranged in snake-like motifs under the rim, represents the other form of this period. Holemouth jars are also part of the assemblage. Nine broad categories and forms are distinguishable: bowls (Figs 17: 1–3, 5, 8; 19: 1, 2, 11; 20: 5, 6, 10–12; 21: 1, 2; 22: 1, 2, 5), bowls with knob decoration under the rim (Figs 18: 7; 20: 1, 7; 20: 12, 13), bowls with a lot of perforation (manqal?) (Fig. 17: 7), jars (Figs 17: 4; 20: 7; 20: 8, 9, 13; 21: 4–6, 8, 11, 14; 22: 3, 4), jars with everted rims and short neck (Figs 17: 9; 18: 1, 2, 5, 6; 19: 8–10; 20: 2–4; 21: 7), jars with everted rim and perforation (Figs 17: 6; 20: 14; 21: 8; 22: 8), jars decorated with an annular coil around the shoulder (Fig. 18: 3), rail rim jars (Fig. 21: 10) and jars with vertical comb design bases (Figs 19: 5; 22: 6, 11).

### 2.2.2 Kul Tepe VIA (3900–3700 BC) (LC3= Chaff-faced Ware)

#### Buildings

Two main architectural phases were unearthed from the LC3 period in Trench III and II. One of them is mud-brick architecture, including a wall, with three rows, which was built on a stone foundation. This wall is built of mud bricks, 40 × 25 × 15 cm and 30 × 20 × 15 cm in size (Fig. 16: 2). Second important one is a stone-built round house that appeared 12.6 m from radix point of Trench II. It was built from irregular stones and reached more than 3.5 m in diameter (Figs 23: 1; 24: 1). Unfortunately, due to the limitations of excavation in Trench III it is impossible to discuss the architecture of this period further or compare the architecture of the Late Chalcolithic and Proto-Kura-Araxes periods.

#### Ceramics

One of the important findings of this period is the appearance of two sherds of Red Black Burnished Ware in the uppermost layers of Trench III. The other prominent finding is impressions made by a mat on the surface of two LC3 sherds. A total of 394 pot sherds were recovered from Period VIA (LC3) layers in Trench III.

**Manufacture:** Well fired: 288(=73.09%); Under-fired 106(=26.91%)

**Inclusions:** All of the pottery is hand made and characterised by chaff (9=2.28%), mixed (301=76.4%) and grit (84=21.32%) temper; in chaff-tempered cases, the fabric is tempered with fine to medium chaff, which invariably produces a chaff-faced effect.

**Colour range:** The colours of the ware range from grey and red, to pink, buff, black/blackish, brown and light brown, plum and blackened.<sup>24</sup> The section can be monochrome (brown, reddish-brown and buff) but in most cases shows grey core.

**Surface treatment:** Most of the sherds have a slip treatment (ext. 186=61.3%; int. 198=62.1%) although wet-smoothed (ext. 5=1.45%; int. 7=0.80%) surface that has been treated with either an orange or a brown wash (ext. 24=11.13%; int. 27=11.29%) and burnished surface (ext. 119=13.7%; int. 103=13.87%) was applied in most cases. Other examples have no surface treatment (ext. 59=12.42.67%; int. 59=11.94%). One of the important findings was signs of bitumen on the interior surface of vessels. The impression made by a woven mat on the exterior surface of the vessel is another finding of Period VIB in Kul Tepe. In this assemblage, combed pottery is typical.

**Decoration:** In terms of decoration, comb and groove design (45=11.43%), excised (5=1.27%), rail rim (5=1.27%), geometric painted pottery (1=0.25%) and incised design (3=0.76%) are predominant in the assemblage, but most of the sherds are undecorated (335=85.02%). In comb and groove design, before firing the surface has been scraped with a brush or a comb-like tool. In excised decoration, circular or oval knobs have usually been applied below the rim of bowls and jars.

**Principle shapes:** Nine broad categories and forms are distinguishable: bowls (Figs 25: 1, 3, 4; 26: 1, 9; 28: 2, 6, 7, 13–15; 29: 3), pierced bowls (Fig. 28: 16), rail rim bowl (Fig. 28: 6); jars (Figs 25: 2, 7; 26: 2; 27: 4; 28: 1, 3), jars with everted rims (Figs 26: 10; 27: 1–3, 6; 28: 4, 5), pierced jars (Figs 25: 9; 26: 3, 7), necked jars (Figs 25: 5, 6; 27: 5; 28: 8, 11, 12; 29: 4, 5), rail rim jars (Figs 25: 8; 26: 8; 29: 2) and jars with vertical comb design bases (Figs 25: 11; 26: 4, 5; 28: 18, 19).

### Lithics

Most of the lithic artefacts from Late Chalcolithic of Kul Tepe are made of obsidian. Almost all of the lithic industry of this period is obsidian (more than 90%), although there are some rare chert/flint specimens. The number of utilised flakes increased during this period, although artefacts like the utilised blade, utilised bladelet, notch, denticulate, side-scraper, end-scraper, burin, point, and sickle blades have also been used.

### Metallurgy

During the excavation in trench II one metal object and one whole metal furnace structure was obtained. One of the metallurgy installations is metal furnace structure. Fortunately we could reach the whole furnace structure. This structure that appeared 13.05 m from radix point of Trench II is 80 × 60 cm in dimension with two inner and outer circles very hard and burnt

<sup>24</sup> Grey (10YR 6/1, 6/2; 7.5YR 5/1, 6/1, 7/1; 5YR 6/1, 7/1) (ext. 116=37.9%; int. 116=39.08%) and red (10R 4/8, 6/8; 7.5YR 7/6; 5YR 6/4, 6/6; 2.5YR 6/6, 6/8) (ext. 96=11.45%; int. 128=9.7%) to pink (7.5YR 7/3, 7/4, 8/2, 8/3, 8/4; 5YR 7/3, 7/4, 7/6, 8/2) (ext. 77=38.25%; int. 89=42%), buff (7.5YR 8/2, 8/3; 10YR 6/2, 6/3, 7/2, 7/3, 8/2, 8/3, 8/4) (ext. 36=8.54%; int. 35=5.96%), black/blackish (5YR 2.5/1; 7.5YR 2.5/1; 10YR 2/1) (ext. 25=0.96%; int. 16=1.3%), brown and light-brown (5YR 4/3, 4/4) (ext. 11=0.16%; int. 6=0.16%), plum (ext. 7=2.74%; int. 2=1.8%) and blackened (ext. 26=2.74%; int. 2=1.8%).

structure. Any object was found inside the furnace but the form and the position suggest metal smelting for this structure, although this form is completely unknown for this region (Fig. 23: 1). The metal object is very small (1 × 3 cm), but it is very important in northwestern Iran's prehistoric archaeology because it shows the earliest metallurgy activities at the region (Fig. 23: 2).

#### Other artefacts

Grinding material (pestles, mortars, querns, hand-stones) alongside bone awls (Fig. 11: 2), constitute other findings from Kul Tepe during this period. Special finds have been brought to light from Late Chalcolithic layers that resemble artefacts like weight scales (Fig. 11: 3).

### 3. Kul Tepe V (3600–3200 BC): Kura-Araxes I

An important, enigmatic and in some cases problematic phase at Kul Tepe is the Proto-Kura-Araxes and Kura-Araxes I period. About 3.5 m of layers in the stratigraphic section of Trench III include this transitional period (Fig. 4). “The Proto-Kura-Araxes and Kura-Araxes I period” is currently almost an empty term, because we know little or nothing about the cultural and social processes taking place in the first quarter and middle of the fourth millennium BC in northwestern Iran and the Southern Caucasus. Only Kul Tepe's pottery repertoire shows some *changes* and *continuity* between the painted pottery of Pisdeli, later Sioni and Chaff-faced Ware, and subsequent monochrome black/brown burnished ware.

A most interesting discovery was the fact that these Kura-Araxes I strata were directly preceded by the earlier LC3 occupation level at the site. No gap in occupation is indicated.

#### Buildings

Two main architectural phases were obtained from the Kura-Araxes I period in Trench II. First phase of building (F. 2041) was brought to light at 11.75 m depth. It is a mud-brick circular structure. It comprises five mud-brick with approximate dimensions of 35–40 cm × 10–15 cm × 10 cm modules (Fig. 24: 2). Second phase also is a mud-brick structure with *ca.* 6 mud-brick (40 × 20 × 15 cm) at 11.60 m depth (Fig. 30: 1).

The most important discovery of the Kura-Araxes I period in Trench II was a pottery kiln which shows that ceramic production took place at the site during the Kura-Araxes I period. Unfortunately, because of destruction from previous bulldozing, we were missing the complete structure of the kiln; however, a lot of typical Kura-Araxes I pottery was obtained from inside the kiln. Some deformed sherds and typical Kura-Araxes I pottery with Nakhichevan lugs was also brought to light. The Kura-Araxes pottery kiln seems to be completely different in type from other known kilns belonging to this time span. As the profile and picture of the kiln shows, it seems that all the pottery of this period was made in a pit firing kiln. Pottery that is referred to as being pit fired is not glazed and has been fired on an open bonfire or in a primitive pit kiln. “Pit fired pottery kiln” is an imprecise term. In an open fire, the potter can only expect to attain a low temperature; this is adequate for baking pottery, and was commonly employed in early societies. This kiln, a very important installation, and its related structures can be radiocarbon dated to 3400 BC (Fig. 31).

## Ceramics

A total of 223 pottery sherds were brought to light in the Proto-Kura-Araxes and Kura-Araxes I period.

At Kul Tepe in addition to the Monochrome ware there are also fragments of a very coarse chaff-tempered pottery, reminiscent of the Chalcolithic traditions. They are evidence for a probable transition from Late Chalcolithic to Kura-Araxes I, since some elements of the Late Chalcolithic are also visible in Kura-Araxes I.

Some scholars have already mentioned that on account of its typological, technological and functional features, monochrome burnished ware was the common denominator of the South Caucasian communities in phase KA I.<sup>25</sup>

**Manufacture:** Most of the pottery is hand made (207=92.82%).

**Inclusions:** The fabric is characterised by grit (219=98.2%) and mixed (4=1.8%) temper.

**Colour range:** During this period the frequency of grey/black and reddish brown is striking. The pottery is exclusively monochrome with colours ranging from grey, black and red, to buff, brown and blackened.<sup>26</sup>

**Surface treatment:** The surfaces are often smoothed. Most of the sherds have a burnished surface (ext. 136=61%; int. 119=53.36%) and (ext. 79=35.42%; int. 95=42.60%) sherds indicate slip and wash (ext. 4=1.79%; int. 3=1.34%) treatment. Some samples (ext. 4=1.79%; int. 6=2.7%) show no treatment.

**Decoration:** Most of the pottery surface is undecorated (209=93.72%) during period V in Kul Tepe. In rare samples, excised (7=3.14%) and incised (7=3.14%) decoration appeared.

**Principle shapes:** The pottery repertoire comprises simple jar with incised decoration (Figs 32: 5; 34: 6), deep jars with an S-shaped profile, high, pronounced shoulders and an everted rim (Figs 33: 2, 5, 6; 34: 1–3, 5, 7) and large jars with wide flat (Fig. 33: 4) and concave bases (Fig. 32: 6) with slightly concave profiles. The other pottery types include jars with a narrow neck and everted rim (Figs 32: 1, 4, 7, 8) and jars with a cylindrical neck, an everted rim and Nakhichevan-Lug (Figs 32: 3; 33: 3, 7, 9; 34: 4, 8, 9).

## Lithics

As in previous periods, obsidian constitutes the main lithic assemblage of Kul Tepe during the Proto-Kura-Araxes and Kura-Araxes I period.

## Other artefacts

One of the important and rare ornamental objects of Kul Tepe V was four small agate beads which attained in the Kura-Araxes I layers of Trench II (Fig. 46: 5). One metal object (copper)

<sup>25</sup> Palumbi 2008, p. 311.

<sup>26</sup> More specifically: Grey (5 YR 4/1; 7.5 YR 5/1, 6/1; 10YR 4/1, 5/1) (ext. 111= 49.77%; int. 113= 50.67%), black (ext. 48=21.52%; int. 45=20.17%) and red (5YR 6/6, 5/8; 2.5YR 5/6, 5/8) (ext. 24=10.76%; int. 37=16.59%), to buff (7.5YR 8/2, 8/3; 10YR 8/2, 8/3, 8/4) (ext. 17=7.62%; int. 12=5.38%), brown (5YR 5/4, 5/6) (ext. 13=5.83%; int. 11=4.94%) and blackened (ext. 10=4.5%; int. 5=2.25%).

was found; this is important because in this phase metal objects are very rare. Two bone awls constitute another small finds from this period (Fig. 47: 2, 3). Grinding stones (pestles, mortars, and querns) comprise other materials from the site during this period.

#### 4. Kul Tepe IV (3200–2500 BC): Early Bronze Age

Kura-Araxes material culture was identified in 8 m of archaeological deposits from the Early Bronze Age (Kura-Araxes II, III) layers of Trenches I and II at Kul Tepe. Finds included: 1) diagnostic Grey-Black Burnished Ware; 2) typical circular house/circular shaped buildings of mud brick, wattle and daub and stone; 3) standardised horned animal figurines; 4) military and ornamental bronze objects; 5) standardised stone obsidian tools.

Early Bronze Age layers were recovered in both step trenches, I and II. According to the stratigraphic sections in Trenches I and II, about 7.5–8 and 8 m respectively of Kul Tepe materials related to this period (Figs 4, 6).

##### Buildings

From an architectural point of view, four building phases were excavated in Trench I. All of the structures in Trench I are made from stone. One of them is circular, with a diameter of more than 5 m, and built with irregular stones (Fig. 35: 1). The remaining three structures are rectangular in shape (Fig. 35: 2). Trench II also brought to light four building phases. In two cases they are Early Bronze Age houses of circular shape and made of mud brick (Figs 30: 2; 37). One of these structures was disclosed at a depth of 6.4 m. This prominent mud-brick circular structure had a diameter greater than 3 m. The plan shows an orthogonal mud-brick (40 × 30 × 15 cm) structure of 1 m × 90 cm attached to the circular structure. An interesting find is signs of a mat and three-handled pitcher Nakhichevan-Lug on the floor of this structure (Fig. 36). In the other two cases, the buildings are rectangular structures, again of mud brick (Figs. 37: 1–2). Other important structural findings at Kul Tepe include a heated complex covered with burnt pottery sherds. The purpose of this structure is ambiguous, and the available *in situ* form doesn't suggest any known structure (Figs 38, 39).

Other important finding of Kul Tepe IV, which appeared at 3.2 m, is a bakery oven in Trench II. It is oval in shape (70 × 60 cm and 5–10 cm thickness and 40 cm depth) and constitutes with clay and heated during its use. This oven placed close to stone-built structure and cut into floor of this phase of building. A lot of ashy deposit appeared beside and some black-burnished pottery sherds along with caprine bone fragments were obtained from inside of this oven (Fig. 40).

##### Ceramics

A total of 275 pottery sherds were brought to light from the Early Bronze Age (Kura-Araxes II and III) period. The pottery can be divided into three general types: burnished black and grey ware (greyish-black), red and buff ware, and grey ware with brown slip, both interior and exterior.

**Manufacture:** Most of the pottery is hand made (240=87.27%), but some sherds have the sign of low-wheel (35=12.73%).



**Inclusions:** The fabric is characterised by grit (265= 96.36%) and mixed (10=3.64%) temper. During this period the frequency of grit inclusion increases dramatically.

**Firing:** Well fired: 237(=86.18%); under-fired: 38 (=13.82%)

**Colour range:** Most of the exterior surfaces of the assemblage are grey and black, to red, buff, brown and blackened.<sup>27</sup>

**Surface treatment:** Most of the sherds have a burnished surface (ext. 222=80.74%; int. 209=76%) and (ext. 48=17.45%; int. 57=20.74%) sherds indicate slip and wash (ext. 2=0.72%; int. 2=0.72%) treatment; (ext. 3=1.09%; int. 7=2.54%) samples show no treatment.

**Decoration:** In terms of decoration, most of the sherds are simple without any decoration (254=92.38%). Of the few samples indicating decoration, it usually takes the form of excised (5=1.81%) or incised (13=4.72%) patterns. In some cases there is incised decoration with white paste (3=1.09%) (Figs 41: 5, 7–10), like Yanik pottery, and in a few samples decoration is restricted to one or two dimples located on the wider part of the vessel's body, though simple motifs (such as concentric circles) occur occasionally (Fig. 41: 10). In this period Nakhichevan lugs are one of the typical morphological traits.

**Principle shapes:** Predominant shapes are: triple-handled Nakhichevan lug jars (Fig. 41: 1); jar with everted rim, cylindrical neck and high, pronounced shoulders, an ovoid-shaped body (Figs 42: 1, 2, 11, 15; 43: 9, 10; 44: 11; 45: 2–5, 12, 13); jars with round body that includes diagnostic Nakhichevan lugs (Figs 42: 3, 4, 7, 8, 16, 19, 20; 43: 7, 12; 45: 6, 9); jarlets with short neck (Fig. 41: 7–9); single handle pitchers, with flat or concave bases, pear shaped bodies, and handles set on the shoulder (Figs 43: 1, 11; 45: 7) (The pitcher is relatively complete.); bowl (Figs 42: 6, 9, 10, 14, 17; 43: 8; 44: 1, 2, 5, 6; 45: 1, 8); single-handled bowls with relief decoration under the rim (Fig. 41: 3, 6); one-handled (Nakhichevan-Handle) bowls with rounded body (Figs 42: 12, 13; 43: 6; 44: 4, 8, 9); four-legged fruit bowl with one Nakhichevan-Lug around the shoulder (Fig. 41: 4); beakers with wide concave neck (Figs 43: 2–4; 44: 3, 10; 45: 10); one-handled cups (Fig. 43: 5); shallow trays (Fig. 42: 18) and lids with Nakhichevan lugs (Fig. 41: 2) and flat lid with a central depression (Fig. 41: 5).

## Metallurgy

During the fourth to first millennia BC, the Caucasus was one of the most prolific metalworking areas of the Old World.<sup>28</sup> During the Early Bronze Age, metallurgy reached a high level of development. It was during this period that copper-arsenic alloys started to be used for making artefacts of high quality.<sup>29</sup> Excavation of Kul Tepe brought to light both ornamental and military arsenical bronze objects related to the Kura-Araxes period, along with all the installations of metallurgy, such as moulds (Fig. 46: 3). Two typical bronze objects were brought to light: one

<sup>27</sup> Grey (7.5 YR 7/1, 6/1, 5/1, 4/1; 5 YR 6/1, 7/1; 2.5 Y 5/3) (ext. 141=51.3%; int. 156=56.75%) and black (5 YR 2.5/1, 7.5 YR 2.5/1; 10 YR 2/1) (ext. 57= 20.72%; int. 35=12.73%), to red (10R 6/8; 2.5 YR 6/6, 6/8; 5 YR 6/4, 6/6, 6/8; 7.5YR 7/6) (ext. 42=15.27%; int. 62=22.54%), buff (10YR 7/2, 7/3, 8/3, 8/4) (ext. 12=4.36%; int. 7=2.54%), brown (5 YR 6/3, 7/3, 8/2; 7.5 YR 5/2, 5/3, 5/4, 5/6) (ext. 5=1.81%; int. 13=4.72%) and blackened (ext. 18=6.54%; int. 2=0.72%).

<sup>28</sup> Kohl 2007, p. 122; Summers 2013a.

<sup>29</sup> Bakshshaliyev and Marro 2009, p. 17.

of them is a small dagger of 10 cm length, 3 cm width and 2.5 cm thickness (Fig. 46: 2); another is an earring, 2 cm long and 1 cm thick, with a spiral shape (Fig. 46: 1). These objects are important because they were found in settlement layers not in graves.

#### Other artefacts

Excavation of the Early Bronze Age layers of Trench I brought to light a special find that we identified as possibly a *stamp seal*. Its shape and form are entirely like a spindle whorl, but the design and pattern resemble a seal. The design is geometric and the pattern is symmetrical (Fig. 48). Among the Early Bronze Age small finds, four clay animal figurines are noteworthy. Three of them are rams and one of them is a bull figurine (Fig. 49).

Because of the thickness of the Early Bronze Age layers at Kul Tepe (8 m), all the subsistence items, including miniature clay bowl (Fig. 46: 6), grinding stones (pestles, mortars, querns, hand-stones) (Figs 50: 2, 6), stone and clay spindle whorls (Figs 47: 1, 4), and bone awls, have been revealed, including Kura-Araxes II and III.

### 5. Kul Tepe III: Middle and Late Bronze Age (Urmia Ware)

After the Early Bronze Age layers, distinctive Middle Bronze Age pottery (so-called Urmia Ware) appeared. An interesting discovery was the fact that these Urmia Ware strata were directly preceded by the earlier EBA occupation level at the site. No gap in occupation is indicated. Another important finding is the appearance of jars with Nakhichevan-Lug along with typical Urmia Ware in one locus. This is important why it demonstrated a type of coexistence or continuation of EBA people in MBA. It is difficult to interpret this complicated scenario, but in some cases we faced with this coexistence (Fig. 51).

According to the stratigraphic section, about 1 m of Kul Tepe deposit has been assigned to Urmia Ware. Our survey of the site showed that most distributions of Middle Bronze Age pottery are concentrated on the eastern slope, and because of this we can see only few deposits of this period in Trenches I and II (Figs 3, 4).

#### Buildings

Only, one circular structure was brought to light during excavation in Trench II.

#### Ceramics

Both early and late phases of this period were found. Excavation revealed three varieties of pottery from the Middle and Late Bronze Age that we called Urmia Ware (Fig. 51)

*Monochrome*: Monochrome pottery was dominated by one particular motif, which consisted of a series of wavy lines, sometimes enclosed by a semi-circle hanging from the rim of the vessel (Figs 51: 8, 10).

*Bichrome*: Bichrome pottery is also dominated by the semi-circle motif with wavy lines, formed by applying bands of black paint over the red outline. Black-on-red slip designs were evident, often involving horizontal wavy lines (Figs 51: 2, 9).

**Polychrome:** The motif which appears most often on polychrome ware is a band of diamonds outlined in black on a white background. This design can take several forms; the most prevalent is a diamond divided in half by a vertical black line with one side painted red and the other hatched black. The hatching is either vertical or at a slight angle and can occupy either the right or the left half of the diamond (Figs 51: 1, 7).

A total of 134 pottery sherds were recovered for the Middle Bronze Age period.

**Manufacture:** Most of the pottery is hand made (79=59.95%), though some sherds show signs of being wheel made (55=40.05%).

**Inclusions:** The pottery is characterised by grit (132= 98.50%) and mixed (2=1.5%) temper.

**Firing:** Well fired: 127(=94.8%); under-fired: 7(=5.2%)

**Colour range:** Most of the exterior surfaces of the assemblage are red or buff, to grey, black, brown and blackened.<sup>30</sup>

**Surface treatment:** Most of the sherds have a burnished surface (ext. 62=46.27%; int. 50=37.31%) and (ext. 49=36.57%; int. 53=39.55%) sherds indicate slip and wash (ext. 5=3.73%; int. 5=3.73%) treatment (ext. 18=13.43%; int. 26=19.4%). Samples show no treatment.

**Decoration:** In terms of decoration, most of the sherds are simple without any decoration (113=84.3%). Of the few samples with decoration, they most usually feature painted (15=11.20%), Polished (3=2.25%), excised (2=1.50%), or incised patterns (1=0.75%).

**Principle shapes:** The diagnostic shape of the monochrome, bichrome and polychrome wares is a bowl which always has a slightly rounded, everted rim with a slight angle near the point of vertical tangency (Figs 51: 3, 4). Other shapes include globular bodied pot with raised shoulder and everted rim (Figs 51: 1, 7), large jar with elongated lower body, raised shoulder, and cylindrical neck (Fig. 51: 2), wide-mouthed beaker with carination on the shoulder (Fig. 51: 3), wide-mouthed beaker (Fig. 51: 4), jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body (Figs 51: 5, 11, 12), jar with Nakhichevan-Lug (Figs 51: 6, 13)

## 6. Kul Tepe III: Iron III; Kul Tepe II: Urartian

The uppermost layers of Kul Tepe include historic periods. According to the stratigraphic section, 1.5–2 m revealed Iron III, Urartian and Achaemenid materials (Figs 3, 4).

The remains of Iron III are comparable with Lake Urmia Basin, Caucasus region and other Iron III-related sites in the northwestern Iran. Only a few samples are related to the Urartian and Achaemenid era because of the limited excavation area.

<sup>30</sup> Red (10R 6/8; 2.5YR 6/6, 6/8; 5YR 6/4, 6/6; 7.5YR 7/6) (ext. 50=37.31%; int. 63=47.02%) or buff (10YR 7/2, 7/3, 8/3, 8/4) (ext. 29=21.64%; int. 16=11.94%), to grey (7.5YR 6/1, 5/1, 7/1; 5YR 6/1, 7/1) (ext. 19=14.18%; int. 34=25.37%), black (5YR 2.5/1, 7.5YR 2.5/1; 10YR 2/1) (ext. 18= 13.43%; int. 10=7.46%), brown (7.5YR 5/2, 5/3, 5/4) (ext. 3=2.24%; int. 4=2.99%) and blackened (ext. 15=11.20%; int. 7=5.22%).

## Buildings

From an architectural point of view, two stone-built round building phases were identified, with a lot of household materials inside them. During excavation of these domestic buildings, six storage jars (grain scoop) have been exposed, lying on the floor (Fig. 52). The round buildings include a stone-built structure that appeared at 1.35 m and continued to 1.6 m. It comprises two rows of 11 irregularly shaped boulder stones and has a diameter of about 1.8 m. Other structures are attached to this building, some of them round and some of them rectangular in shape. One typical rectangular structure is 55 cm × 2.75 m in size. Because of the limited excavation area only small parts of the structures have been detected (Fig. 53).

Two architectural phases have been exposed in a limited area and have yielded the remains of rectangular structures built of stone and mud brick in Trench I during Kul Tepe III. One has a foundation containing two rows of stone and one of mud brick, at a depth of 1.9–2.3 m from the radix point of Trench I. The structure measures 1.4 m × 30 cm, with 40 cm depth (Fig. 54).

## Ceramics

A total of 97 typical pottery sherds were recovered from this period.

**Manufacture:** Most of the pottery is hand made (58=59.8%) but some (39=40.2%) sherds have signs of being wheel made.

**Inclusions:** The pottery is characterised by grit (95=97.94%) and mixed (2=2.06%) temper.

**Firing:** Well fired: 90(=92.78%); under-fired: 7(=7.22%)

**Colour range:** Most of the exterior surfaces of the assemblage are red or buff, to grey, black, brown and blackened.<sup>31</sup>

**Surface treatment:** Most of the sherds have a burnished surface (ext. 37=38.15%; int. 27=27.84%) and (ext. 35=36.08%; int. 40=41.23%) sherds indicate slip and wash (ext. 5=5.15%; int. 2=2.06%) treatment. Some (ext. 20=20.62%; int. 28=28.87%) samples show no treatment.

**Decoration:** Most of the sherds are simple without any decoration (84=86.6%). The few samples indicating decoration usually feature painted (8=8.25%) and excised (5=5.15%) patterns.

**Principle shapes:** Various shapes and forms are: wide-mouthed beaker with carination on the shoulder (Fig. 55: 1); one-handled beaker (Figs 55: 6; 56: 5; 57: 1, 9); small round body pot (Fig. 55: 2); bowl with everted short necked and round body (Figs 55: 3; 57: 15); jar with everted rim and short neck (Figs 57: 4, 5, 7, 8, 9; 56: 1–3, 6–9, 14–16; 57: 12, 16); bowl with flat base (Figs 58: 4, 10; 57: 2, 10); open mouthed bowl with everted rim and narrow base (Fig. 56: 13); carinated bowl with everted rim (Figs 57: 3–5, 7, 13–14); shallow tray (Fig. 57: 11).

<sup>31</sup> Red (10R 6/8; 2.5YR 6/6, 6/8; 5YR 6/4, 6/6) (ext. 42=43.31%; int. 54=55.67%) or buff (10YR 7/2, 7/3, 8/3, 8/4) (ext. 28=28.86%; int. 18=18.55%), to grey (7.5YR 6/1, 5/1, 7/1; 5YR 6/1, 7/1) (ext. 9=9.28%; int. 11=11.34%), black (7.5YR 2.5/1; 10YR 2/1) (ext. 7=7.21%; int. 6=6.18%), brown (7.5YR 4/3, 4/4) (ext. 2=2.06%; int. 4=4.12%) and blackened (ext. 9=9.28%; int. 4=4.12%).

## 7. Kul Tepe I: Achaemenid Period

One of the interesting findings of the Kul Tepe excavation was the Achaemenid material. At the uppermost layers of the site a lot of diagnostic Achaemenid painted pottery was brought to light (Figs 59–60).

### Building

Only one building phase was excavated from Kul Tepe I at the uppermost layers of Trench I. This is rectangular stone-built structure with some irregular stones and a few small structures inside this building (Fig. 58).

### Ceramics

A total of 66 typical pottery sherds were recovered during this period.

**Manufacture:** Most of the pottery is hand made (40=60.60%) though some (26=39.40%) sherds have signs of being wheel made.

**Inclusions:** The pottery is characterised by grit (65=90.9%) and mixed (1=1.52%) temper.

**Firing:** Well fired: 60(=92.78%); under-fired: 6(=9.1%)

**Colour range:** Most of the exterior surfaces of the assemblage are red or buff, to grey, black, brown and blackened.<sup>32</sup>

**Surface treatment:** Most of the sherds have a burnished surface (ext. 8=12.13%; int. 6=9.1%) and (ext. 44=66.67%; int. 44=66.67%) sherds indicate slip and wash (ext. 7=10.60%; int. 5=7.57%) treatment. Some (ext. 7=10.60%; int. 11=16.66%) samples show no treatment.

**Decoration:** Most of the sherds are simple without any decoration (55=83.34%). The few samples indicating decoration usually feature painted (4=6.06%), excised (3=4.54%) and incised (4=6.06%) patterns.

**Principle shapes:** main shapes include: carinated bowl with everted rim (Figs 60: 1, 3; 61: 1, 6); carinated bowl, grading into semi-hemispherical bowls, with straight or slightly everted rims (Figs 60: 7; 61: 3, 7, 8); hemispherical bowl with slightly thickened rims (Fig. 60: 2); shallow and dimple base fragment of a carinated bowl (Fig. 60: 6); jar with everted rim (Figs 60: 4, 5, 9); and miniature jarlet (Fig. 60: 11).

Dyson introduced this pottery as the Achaemenid painted pottery of Hasanlu IIIA:<sup>33</sup>

The original term 'Triangle Ware' was applied to handful of sherds found in the early stages of excavation of Hasanlu which were quite distinct from other pottery being found. He divided this pottery to 'Western Triangle Ware' and 'Eastern Triangle Ware' and he used Western Triangle Ware

<sup>32</sup> Red (10R 6/8; 2.5YR 6/6, 6/8) (ext. 15=22.72%; int. 28=42.42%) or buff (10YR 7/2, 7/3, 8/3, 8/4) (ext. 29=43.94%; int. 17=25.75%), to grey (7.5YR 6/1, 5/1, 7/1; 5YR 6/1, 7/1) (ext. 12=18.18%; int. 11=16.66%), black (10YR 2/1) (ext. 2=3.03%; int. 1=1.51%), brown (7.5YR 4/3, 4/4) (ext. 5=7.58%; int. 6=9.09%) and blackened (ext. 3=4.55%; int. 3=4.54%).

<sup>33</sup> Dyson 1999.



for all stylistically-related materials in western Iran, eastern Turkey and Georgia. What he calls 'Western Triangle Ware', is a fine buff pottery, very thin, with high polish, and painted with triangles around the rim.<sup>34</sup>

These wares found in the uppermost layers of excavation at Kul Tepe include deep or shallow carinated bowls with designs painted around the inside of the flaring rims; carinated bowls with square, everted rims; and uncarinated sinuous-side bowls painted inside the rim. Sherds painted in bichrome on a burnished cream slip, with solid triangle-and-line patterns, and painted sherds with geometric patterns in thin brown lines also occur. All of this pottery is wheel made, hard, well fired, and tempered with fine grit or sand. Cores are pinkish-buff and exteriors are often cream-slipped. Paint colours range from plum-brown to dark brown, red-brown or occasionally red. Dyson dated these types of pottery to the fifth and fourth centuries BC (*ca.* 400 BC) and called them "Achaemenid painted pottery".<sup>35</sup>

## SCIENTIFIC ANALYSES

### Radiocarbon Dates

Forty-seven dating samples were collected during the excavation in order that an outline radiocarbon chronology might be determined for the sequence of occupation at the site. Sixteen samples from the Chalcolithic and Early Bronze Age periods were submitted to the Università del Salento, Dipartimento di Ingegneria dell'Innovazione, Centro di Datazione e Diagnostica (CEDAD) laboratory. A total of six dates have been obtained till now and processing of the other samples is in progress. All the radiocarbon samples were dated using Accelerator Mass Spectrometry (AMS). These dates are of great value in interpreting the material record from Kul Tepe and illustrate well the potential of this new method for addressing problems in archaeological research of northwestern Iran and the Southern Caucasus. The AMS dates are plotted in stratigraphic order in **Fig. 61**. The AMS dates themselves form a good series in the correct sequence. The standard deviations for the CEDAD dates are  $\pm 40$  years, indicating that conventional  $C_{14}$  techniques can still offer a tightly defined determination. The standard deviations for the AMS dates are calculated on a different basis, and are intended to be largely inclusive.<sup>36</sup> CEDAD assures the accuracy of its services by the standard measurements provided by international normative organisations (like IAEA) and by comparing its own results with those obtained in other countries.<sup>37</sup> The CEDAD laboratory is now able to quote standard deviations equivalent to an error of  $\pm 40$  years. These dates indicated that Kul Tepe was occupied from *ca.* 4700 BC to 3200 BC. Details are shown in **Fig. 61**.

<sup>34</sup> Dyson 1958, p. 1; 1965, p. 204.

<sup>35</sup> Dyson 1999.

<sup>36</sup> Gillespie *et al.* 1985, p. 237.

<sup>37</sup> Reimer *et al.* 2004; Reimer *et al.* 2009.

Kul Tepe: East Azerbaijan Province, Iran – Charcoal and Bone samples from trenches I, II and III which excavated in 2010

| Trench NO. | Locus/Feature NO. | Register NO. | Description of context  | Sample   | Sample depth (cm) | NO |
|------------|-------------------|--------------|---|----------|-------------------|----|
| III        | L. 3028           | 3173         | Grey Ashy Deposit on Virgin Soil  | Charcoal | 780               | 1  |
| III        | L. 3027           | 3162         | Grey Ashy Deposit Near Structure  | Charcoal | 760               | 2  |
| III        | L. 3022           | 3134         | Grey Ashy Deposit Near Structure  | Charcoal | 455               | 3  |
| III        | L. 3018           | 3117         | Grey Ashy Deposit Near Structure  | Charcoal | 343               | 4  |
| III        | L. 3014           | 3085         | Deposit   | Charcoal | 235               | 5  |
| III        | L. 3010           | 3059         | Deposit   | Charcoal | 175               | 6  |
| III        | L. 3008           | 3034         | Architectural Collapse and Floor  | Charcoal | 120               | 7  |
| III        | L. 3005           | 3034         | Architectural Collapse  | Charcoal | 53                | 8  |
| II         | L. 2055           | 2330         | Grey Ashy Deposit with a lot of Charcoal  | Charcoal | 1445              | 9  |
| II         | L. 2053           |              | Floor   | Charcoal | 1351              | 10 |
| II         | F. 2036           | 2221         | Flattened burnt surface and ash/ charcoal deposit which related to debris of pottery kiln | Charcoal | 1078              | 11 |
| II         | L. 2030           | 2147         | Ashy Deposit with Clay  | Charcoal | 525               | 12 |
| II         | L. 2020           | 2093         | Pit with a lot of ash and Charcoal  | Charcoal | 334               | 13 |
| II         | L. 2009           | 2037         | Architectural Collapse and Floor  | Charcoal | 142               | 14 |
| II         | L. 2002           | 2005         | Brown Clay Deposit  | Charcoal | 130               | 15 |
| I          | L. 1036           | 1115         | Mixed ashy, Clay layer  | Charcoal | 330               | 16 |

Fig. 61. Radiocarbon samples submitted to CEDAD Laboratory (Highlighted ones analysed).

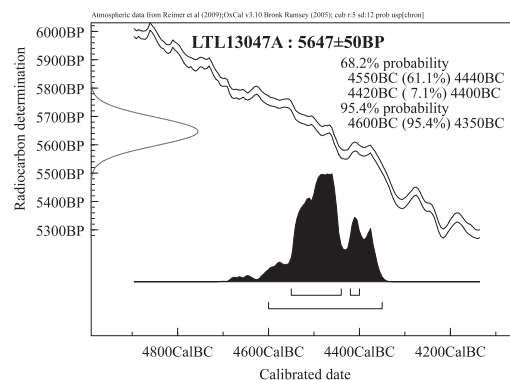
### LTL13047A 5647 ± 50 BP (AMS measurement)

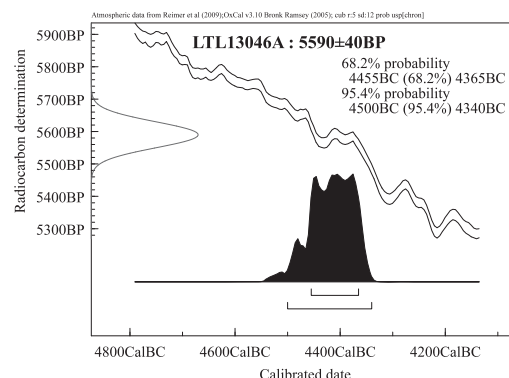
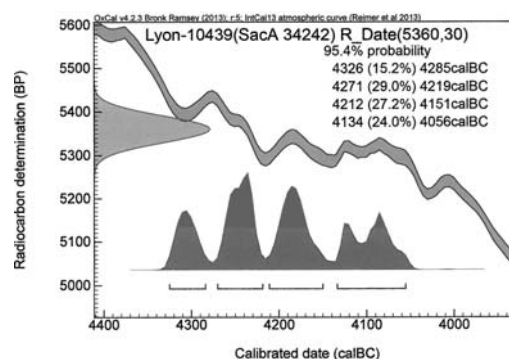
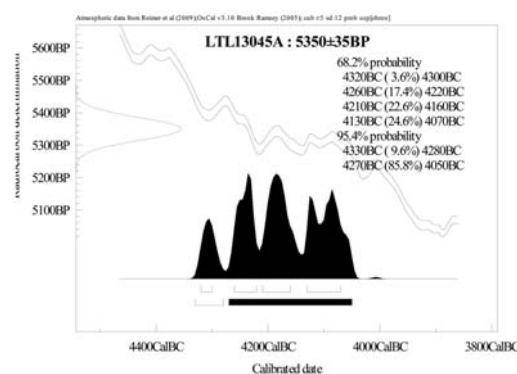
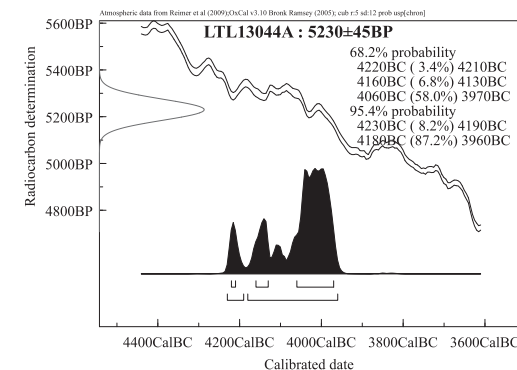
*Sample:* Kul Tepe I, submitted in April 2013 by A. Abedi

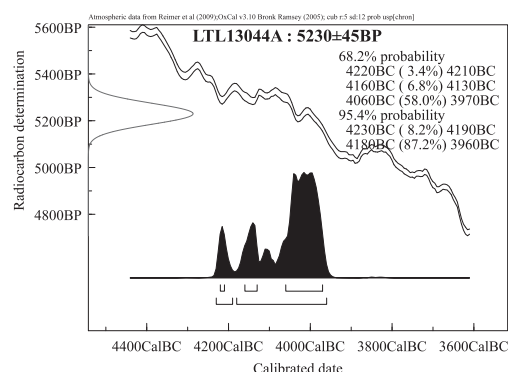
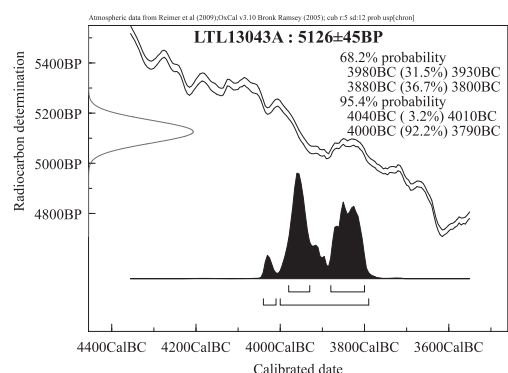
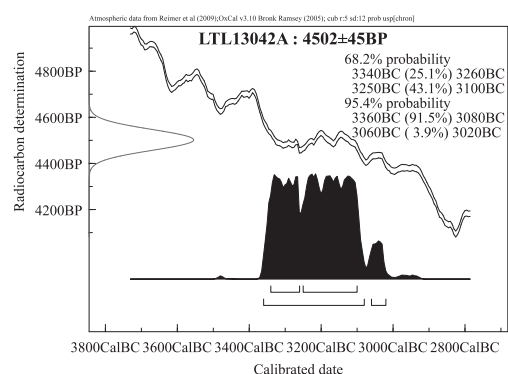
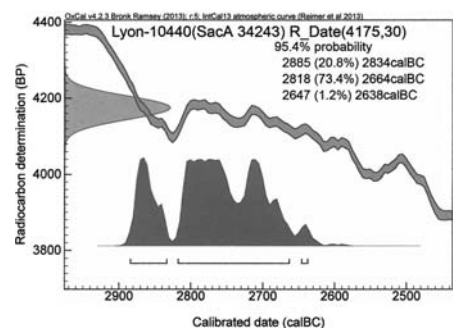
*Context:* Kul Tepe VIII, Locus 3028, Cultural deposit, Trench III.

*Material:* Charcoal

*Calculated date:* 68.2% probability 4550–4440 cal BC  
95.4% probability 4600–4350 cal BC



**LTL13046A 5590 ± 40 BP (AMS measurement)***Sample:* Kul Tepe 2, submitted in April 2013 by A. Abedi*Context:* Kul Tepe VIII, Locus 3022, Grey ashy deposit on virgin soil, Trench III.*Material:* Charcoal*Calculated date:* 68.2% probability 4455–4365 cal BC  
95.4% probability 4500–4340 cal BC**Ly-10439 (SacA-34242) 5360 ± 30 BP (AMS measurement)***Sample:* Kul Tepe 3, submitted in December 2012 by C. Chataigner*Context:* Kul Tepe VIB, Locus 3018, Grey Ashy Deposit Near Structure in Trench III.*Material:* Charcoal*Calculated date:* 95.4% probability 4326–4056 cal BC**LTL13045A 5350 ± 35 BP (AMS measurement)***Sample:* Kul Tepe 3, submitted in April 2013 by A. Abedi*Context:* Kul Tepe VII, Locus 3014, Grey ashy deposit near structure, Trench III.*Material:* Charcoal*Calculated date:* 68.2% probability 4130–4070 cal BC  
95.4% probability 4270–4050 cal BC**LTL13044A 5590 ± 40 BP (AMS measurement)***Sample:* Kul Tepe 4, submitted in April 2013 by A. Abedi*Context:* Kul Tepe VIB, Locus 3005, architectural collapse, Trench III.*Material:* Charcoal*Calculated date:* 68.2% probability 4060–3970 cal BC  
95.4% probability 4180–3960 cal BC

**LTL13044A 5590 ± 40 BP (AMS measurement)***Sample:* Kul Tepe 4, submitted in April 2013 by A. Abedi*Context:* Kul Tepe VIB, Locus 3005, architectural collapse, Trench III.*Material:* Charcoal*Calculated date:* 68.2% probability 4060–3970 cal BC  
95.4% probability 4180–3960 cal BC**LTL13043A 5126 ± 45 BP (AMS measurement)***Sample:* Kul Tepe 5, submitted in April 2013 by A. Abedi*Context:* Kul Tepe VIA, Locus 2055, Grey ashy deposit with a lot of charcoal, Trench II.*Material:* Charcoal*Calculated date:* 68.2% probability 3880–3800 cal BC  
95.4% probability 4000–3790 cal BC**LTL13042A 4502 ± 45 BP (AMS measurement)***Sample:* Kul Tepe 6, submitted in April 2013 by A. Abedi*Context:* Kul Tepe V, F. 2036, Flattened burnt surface and ash/charcoal deposit related to debris of pottery kiln, Trench II.*Material:* Charcoal*Calculated date:* 68.2% probability 3250–3100 cal BC  
95.4% probability 3360–3080 cal BC**Ly-10440 (SacA-34243) 4175 ± 30 BP (AMS measurement)***Sample:* Kul Tepe 8, submitted in December 2012 by C. Chataigner*Context:* Kul Tepe IV, Locus 2030, Ashy Deposit with Clay in Trench II.*Material:* Charcoal*Calculated date:* 95.4% probability 2885–2638 cal BC

### Obsidian Artefacts

During the first season of the Kul Tepe excavations, 1600 lithic artefacts were recovered from Trenches I (215 specimens), II (653 specimens) and III (732 specimens). Of these samples, 690 artefacts were obsidian and 910 artefacts were chert/flint. The 690 obsidian artefacts include 491 specimens from the Chalcolithic period, 150 specimens related to the Early Bronze Age and 49 specimens belong to Iron III. According to a typological classification, all of the specimens were divided into three main groups: utilised tools, blanks and debitage. All utilised flakes, blades, and microblades, as well as drills, scrapers, end-scrapers, points, knives, and cleavers were placed in the category of utilised tools. Blanks included all simple flakes, blades and microblades with signs of retouch. The remaining artefacts were classified as debitage (Fig. 62).

Fifty-three samples of obsidian artefacts were submitted to the Archaeometry Laboratory at the University of Missouri Research Reactor (MURR) for non-destructive analysis by energy dispersive XRF. The artefacts ranged in size from about 4 mm to 1.5 cm in diameter and 1 to 3 mm in thickness.<sup>38</sup>

|                            | Chalcolithic<br>Period | Early Bronze<br>Age | Middle Bronze<br>Age | Iron III |
|----------------------------|------------------------|---------------------|----------------------|----------|
| Utilized Flake             | 6                      | 9                   | 1                    | 4        |
| Utilized Flake with Cortex | 1                      | —                   | —                    | —        |
| Simple Flake               | 3                      | 1                   | —                    | —        |
| Simple Flake with Cortex   | 1                      | 1                   | —                    | —        |
| Flake Core with Cortex     | 2                      | 1                   | —                    | —        |
| Side Scraper               | 1                      | —                   | —                    | —        |
| Point                      | 1                      | 1                   | —                    | —        |
| Notched                    | —                      | 1                   | —                    | —        |
| Denticulate                | —                      | 1                   | 1                    | —        |
| Borer                      | —                      | 1                   | —                    | —        |
| Utilized Blade             | 3                      | 5                   | 2                    | 2        |
| Microblade                 | 2                      | 1                   | —                    | —        |
| Blade with Cortex          | —                      | 1                   | —                    | —        |
| <b>Total</b>               | <b>20</b>              | <b>23</b>           | <b>4</b>             | <b>6</b> |

Fig. 63. Kul Tepe obsidian artefacts selected for analyzes from different periods.

The artefacts were analysed using a Bruker III–V XRF spectrometer. The spectrometer is equipped with an air-cooled rhodium anode with 140 micron Be window and a thermoelectrically

<sup>38</sup> Hughes 2010.



cooled Si-PIN diode detector. The detector has a resolution of 180 eV for the 5.9 keV iron peak. The beam dimensions are approximately  $2 \times 3$  mm. The X-ray tube was operated at 40 kV using a tube current of about 17-A yielding a count rate of about 1200 counts per second. Measurement time was 180 seconds. Concentrations were determined for eight elements (Fe, Zn, Ga, Rb, Sr, Y, Zr, and Nb).<sup>39</sup> Instrument calibration is based on the compositional data collected on a series of well-characterised source samples in the MURR obsidian reference collection.

The first season of excavations brought to light a lot of obsidian tools, indicating that Kul Tepe was a workshop. Provenance results for 53 of the obsidian tools analysed by X-ray fluorescence (XRF) analysis determined that the artefacts from the site of Kul Tepe came from eight different sources: Syunik, Meydan Dağ, Nemrut Dağ, Gegham, Bazenk, Choraphor, Gutansar, and unassigned (one artefact). Our primary studies show that the site of Kul Tepe was involved in a broad network of trade and exchange of obsidian. The main source of obsidian for the workshops in Kul Tepe was Syunik but obsidian sources as far as west as the Lake Van region (Nemrut Dağ and Meydan Dağ) and as far north as Gutansar were also utilised (Fig. 64).<sup>40</sup>

|              | Chalcolithic | Early Bronze Age | Middle Bronze Age | Iron III |
|--------------|--------------|------------------|-------------------|----------|
| Syunik       | 16           | 19               | 4                 | 2        |
| Bazenk       | —            | 1                | —                 | —        |
| Choraphor    | —            | 1                | —                 | —        |
| Ghegam       | —            | 1                | —                 | 1        |
| Gutansar     | —            | 1                | —                 | —        |
| Meydan Dağ   | 2            | —                | —                 | 2        |
| Nemrut Dağ   | 1            | —                | —                 | 1        |
| Unassigned   | 1            | —                | —                 | —        |
| <b>Total</b> | <b>20</b>    | <b>23</b>        | <b>4</b>          | <b>6</b> |

Fig. 65. Eight Different Obsidian Source of Kul Tepe from Chalcolithic to Iron Age.

Our primary studies demonstrate that the most common industry at Kul Tepe was flake and blade production, with a small quantity of microblade manufacture. According to the morphology, as determined from the bulb of force and striking platform of the artefacts, it can be inferred that both pressure and percussion techniques were used at Kul Tepe. Due to the abundance of cores and tools with cortex found at the site, it can be shown that all tools were made *in situ* at the site from the Chalcolithic to Iron Age periods. Given Kul Tepe's location and its distance from obsidian sources in Armenia and Eastern Anatolia, we deduce that long-distance trade and exchange networks were present during the Chalcolithic to Iron Age periods.<sup>41</sup>

<sup>39</sup> Hughes 2010.

<sup>40</sup> Khazaee *et al.* 2011; Khademi Nadooshan *et al.* 2013.

<sup>41</sup> Khademi Nadooshan *et al.* 2013; Khazaee *et al.* 2011; Khatib Shahidi and Abedi 2011.

### Palaeobotany

Some of the most important finds for reconstructing ancient environments are the biological remains revealed through soil flotation analysis. Any locus with carbon remains or ash pockets should be floated for seed and micro-faunal materials. In addition to dry sieving, which generally yields small pottery fragments, flint debitage and micro-fauna, a program of soil flotation will retrieve charred paleobotanical remains. In addition to the botanical remains (the “light fraction”), all residue from flotation (the “heavy fraction”) will be separated for analysis of activity areas. To ensure the collection of statistically meaningful samples that can be used for further comparative analysis (both spatial and temporal), a fixed flotation routine must be maintained. This project employed the froth flotation method, in which soil samples are placed in a water tank, with the light fraction captured in a fine sieve (0.5 mm), and the heavy fraction in a coarse sieve (4 mm) (Fig. 66).

| Trench | Selected Locus/Feature | Litre for flotation | Total     |
|--------|------------------------|---------------------|-----------|
| I      | 8                      | Average: 30 Litre   | 240 Litre |
| II     | 26                     | Average: 30 Litre   | 780 Litre |
| III    | 8                      | Average: 30 Litre   | 240 Litre |

The flotation tank was situated and used in the camp garden. In order to maintain adequate water pressure, the machine was designed to recycle water in a closed system. After each 30-litre of sample the water in the barrel was changed to ensure against contamination (Fig. 66).

Apart from flotation sampling, phytolith, palynology and soil samples were extracted and subsequently stored at the Kul Tepe camp for further detailed study in the future.

### Zooarchaeology

Bone samples were also collected from different loci during the excavations in Trenches I, II and III and then submitted to CNRS for detailed studies by Marjan Mashkour. Based on 24 m of archaeological deposits from different periods, this research compares and contrasts animal-based subsistence practices from the Dalma to the Achaemenid periods (5000–300 BC) in order to explore change and continuity in animal use over time in Kul Tepe. All the samples are currently being processed in the laboratory.

### Micromorphology

Micromorphology is the branch of soil science that is concerned with the description, interpretation and, to an increasing extent, the measurement of components, features and fabrics in

soils at a microscopic level (Bullock *et al.* 1985). Optical microscopy is one of the few techniques that allows us to examine the soil and its components in situ, unaltered and undisturbed by preparation or analytical procedures.

Samples for micromorphology were collected by cutting blocks from different layers (floors, pit, middens, et cetera) and wrapping them in plaster bandages, tissue and tape to avoid disturbing the deposits. In total, 20 deposits were selected from stratigraphic sections: eight from Trench I, eight from Trench II and four from Trench III (Fig. 67). The micromorphological samples may reveal the origin and environment of deposition of sediments; land-use practices; anthropogenic materials and features (for example, ash, cremation, floors, microartefacts); the origin of clays (for example, from mud brick or natural downwards migration through the soil or sediment); the presence of carbonates, gypsum, pyrite, salts, and so on; vegetation cover; post-depositional processes (including pre- and post-soil formation processes); and burning (its impact on the archaeological record, type of fuel, temperature, and so on). All of the samples are undergoing the processes of thin sectioning and detailed analysis.

### GC/MS; SEM; ICP-MS And Lead Isotopic Analysis Of Metal Objects From Kul Tepe

Since the first season of excavations yielded significant metal objects including weapons, ornaments, moulds, and a furnace, more detailed studies are needed. In order to gain a better understanding of the ancient metallurgy of northwestern Iran during the fourth and third millennia BC metal samples were submitted to the Deutsches Bergbau-Museum, Bochum-Forschungsstelle Archäologie und Materialwissenschaften and Archaeometry Department of Islamic Art, University of Tabriz. The analysis is in its final stages and will be published soon.

### Petrography Of Late Chalcolithic And Early Bronze Age Pottery Of Kul Tepe

Twenty samples were submitted to the Archaeometry Department at the Islamic Art University in Tabriz for petrography and mineralogy analysis. Petrography is relatively fast and inexpensive in comparison to other techniques used to identify geological sources, manufacturing techniques and regional differences. Our main objective is to investigate the possible change occurring during the transition from Late Chalcolithic to Early Bronze Age in pottery manufacturing techniques and the petrofabric of sherds. All the samples are currently being processed.

### DISCUSSION

The 5<sup>th</sup> millennium B.C. is one of the important but very enigmatic periods in North-Western Iran. Early stages of the 5<sup>th</sup> millennium BC in NW Iran are launched into widespread expansion of Dalma (5000-4500 BC; calibrated date *ca.* 4890 ± 110; 4600 BC) tradition. There are substantial questions concerning exact time span, the nature of this culture, regional and inter-regional interactions and expansion of widespread Dalma and Dalma-related sites. During mid-fifth or slightly later (Terminal Ubaid: 4500-4200 BC) black on buff so-called Pisdeli culture was gradually replaced in the whole southern, western and northern regions of the Lake Urmia Basin.

Late 5<sup>th</sup> millennium chaff-tempered or chaff-faced ware appears alongside Ubaid-related black on buff during LC2-3 (4200-3800 BC) in NW Iran.

The time period between the end of the Hajji Firuz and the beginning of the Kura-Araxes phenomena is one of the least known, yet most important eras in the ancient history and chronological table of NW Iran. With respect to previous studies in NW Iran it demonstrated that the Chalcolithic period (fifth to the first half of the fourth millennium) remains among the least understood phases of development in the prehistory of the region. Only sparse and scant studies have been undertaken around the Lake Urmia Basin at Pisdeli Tepe, Geoy Tepe, Yanik Tepe and Tepe Dalma,<sup>42</sup> and some further sites are known from surveys but information is restricted to surface collection.<sup>43</sup> The most important reason for the obscurity is a lack of accurate C14 dating in the chronology of northwestern Iran. Only limited C14 dating was obtained from Pisdeli and Yanik Tepe during the 1960s and it is not calibrated; in any case, with one or two samples it is impossible to talk about the chronology of the region. The real obstacle is therefore the dramatic lack of absolute dating (with a few exceptions), which makes it impossible to define the chronological extent of the Chalcolithic and build up a solid internal periodisation and properly articulated timeline for the regional developments in this phase.

Recent excavations located beyond the Southern Mesopotamia provide a welcome opportunity to rethink the significance of the Post-Ubaid horizon from a different angle: several sites located in the Caucasus,<sup>44</sup> central Anatolia or Cilicia (Caneva *et al.* 2012) have indeed yielded a number of features that are traditionally associated with the Post-Ubaid horizon: interestingly enough, however, these findings come from settlements whose cultural sequence seemingly develops from a totally different, that is non-Ubaid, background.

However, the advance of research in neighbouring regions may shed some new light on this hitherto poorly understood area. In the Nakhichevan region, the well-stratified Ovçular Tepesi site provides new information on Late Chalcolithic and Early Bronze Age periods in the region.<sup>45</sup> On the Upper Euphrates we can reference sites like Norsun Tepe,<sup>46</sup> which has a long Late Chalcolithic sequence. In the Jazirah region, Hammam et-Turkman and Tell Zeidan provide a stratified sequence for the beginning of the Late Chalcolithic period.<sup>47</sup> In northern Mesopotamia, sequences at the two key sites of Nineveh and Tepe Gawra<sup>48</sup> have been used to determine the chronology of the region.

However we would rather to use the modified important LC1-5 chronological terminology (Rothman 2001, pp. 5-9) in our discussions put forward by Stein<sup>49</sup> and Marro,<sup>50</sup> and specific local sequences in order to avoid projecting a south Mesopotamian chronology and modes of

<sup>42</sup> Dyson and Young 1960 (Pisdeli Tepe); Burton-Brown 1951 (Geoy Tepe); Burney 1961a and b, 1962, 1964, Summers 2013b (Yanik Tepe); Hamlin 1975 (Tepe Dalma).

<sup>43</sup> Pecorella and Salvini 1984; Kroll 1984; 1990.

<sup>44</sup> For Caucasus (Achundov 2007, 2011; Müseyibli 2007; Lyonnet 2007b; Lyonnet *et al.* 2008; Lyonnet *et al.* 2012; Marro 2010; 2012; Helwing 2012); for central Anatolia or Cilicia see (Caneva *et al.* 2012).

<sup>45</sup> Bakhshaliyev *et al.* 2010; Marro *et al.* 2011.

<sup>46</sup> Gulçur 2000.

<sup>47</sup> Akkermans 1988a; 1988b.

<sup>48</sup> Gut 1995; Rothman 2002; Helwing 2004.

<sup>49</sup> Stein 2012.

<sup>50</sup> Marro 2012.

organization onto northern regions that developed social complexity through processes that were largely, if not completely indigenous and different from those that characterized southern Mesopotamia.

Kiguradze has identified a “Late Sionian” phase, which he places before the emergence of the Kura-Araxes tradition; this might chronologically coincide with the Late Chalcolithic of Northern Mesopotamia and Eastern Anatolia. He has suggested that it was in this phase that a typical Chaff pottery production emerged, along with a change in the repertoires of shapes and the appearance of rectangular mud-brick architectural structures and arsenical copper artefacts.<sup>51</sup> According to Kiguradze and Sagona, the final moments of the Chalcolithic period saw the establishment of a socio-economic organisation that resembled that of the future Kura-Araxes communities.<sup>52</sup> At the same time, according to Kiguradze, this final phase of the Chalcolithic also saw the emergence of a series of elements of a ceramic culture (called “Proto-Kura-Araxes”) which was different from the more traditionally Chalcolithic types and may have heralded in some later Kura-Araxes features.<sup>53</sup>

In recent years in most sites of the southern Caucasus, and especially in the Nakhichevan region and some parts of northwestern Iran, archaeologists introduced a transitional phase between the Late Chalcolithic and Early Bronze Age that they called the “Proto-Kura-Araxes” or “Transitional” phase.<sup>54</sup> In northwestern Iran, Geoy Tepe (K1- period) and Kohne Pasgah Tepesi are the only sites reported till now with remains of the earliest stages of the Kura-Araxes culture.<sup>55</sup> In addition to northwestern Iran, the emergence and earliest stages of Kura-Araxes culture have been reported and published from some sites in the Caucasus, such as Trel, Samshvilde, Berikldeebi, Khizanaant Gora, Didube, Mokhra Blur and Kültepe of Nakhichevan.<sup>56</sup>

According to fresh C14 dating and Kul Tepe V material culture (typical pottery, pottery kiln, circular building ...), it demonstrated that Proto-Kura-Araxes and Kura-Araxes I period were directly preceded by the earlier LC3 occupation level at the site. No gap in occupation is indicated. This data proposed gradual process versus abrupt change in material culture of Kura-Araxisian, although, many uncertainties remain in this regard.

The main morphological and technological specificities of the Kura-Araxes pottery in the Southern Caucasus and Eastern Anatolia are now well known. This pottery, also referred to as “Early Transcaucasian” or “Karaz” ware, is characterised by grit-tempered, black or dark-grey burnished ware. Morphologically, most shapes are carinated, with a few specific traits such as rail-rims and “Nakhichevan lugs”. Decoration is usually geometric, with relief, grooved or incised patterns that sometimes may be very complex.<sup>57</sup>

Noteworthy issue in EBA period of Kul Tepe is the thickness of occupation levels (*ca.* 8-10 m), suggesting that these settlement were occupied by sedentary groups over a long period. It is

<sup>51</sup> Kiguradze 2000, pp. 322–324.

<sup>52</sup> Kiguradze and Sagona 2003.

<sup>53</sup> Kiguradze and Sagona 2003.

<sup>54</sup> Kushnareva 1997; Seyidov 2000; 2003; Kiguradze 2000; Kiguradze and Sagona 2003; Bakhshaliyev *et al.* 2010; Marro *et al.* 2011.

<sup>55</sup> Burney and Lang 1971, p. 59; Sagona 1984, p. 60; Maziar 2010; Omrani *et al.* 2012.

<sup>56</sup> Sagona 1984; Kiguradze 2000; Kiguradze and Sagona 2003; Palumbi 2008, pp. 25–41.

<sup>57</sup> Bakhshaliyev *et al.* 2010, p. 96.



important that, Kul Tepe reached to its biggest extent during this period, when complex societies developed in Eastern Anatolia, Northern (Upper) Mesopotamia, and Southern (Lower) Mesopotamia.

During the first quarter of the second millennium BC, two distinct ceramic traditions cohabited in northwestern Iran. One of them, termed by Stronach “Urmia Ware”, was found in Haftavan Tepe, Level VIB.<sup>58</sup> Urmia Ware is characterised by black and red painting on a white background. Later Bronze Age ceramics consist of Urmia Ware, including painted monochrome and polychrome pottery. In the first half of the second millennium BC Urmia Ware extended over the Urmia Basin,<sup>59</sup> and has been found in Haftavan VIB, Geoy Tepe C/D, Tepe Dinkhah IV, Yanik Tepe, Kordlar Tepe, Tepe Baruj and Gol Tepe.<sup>60</sup> Despite the general similarity between Urmia Wares, regional names are used in different regions; for example, in eastern Georgia it is known as Trialeti-Vanadzor culture, in Azerbaijan, Uzarlik culture, and in Armenia, Karmirberd-Sevan culture.<sup>61</sup>

Urmia Ware can be classified in two phases: early VIB (found as far north as the Araxes region and Transcaucasia) and late VIB (extending only as far as the southern banks of the Araxes). Only one C14 dating (1772 BC) is available for Haftavan VI.<sup>62</sup> A series of archaeomagnetic intensity tests highlighted the following range of dates: Haftavan VIC 2200–2000 BC; Early VIB 1900–1550 BC; Late VIB 1500–1450 BC. On the basis of available data, therefore, we may suggest that the ware is a product of Middle Bronze Age culture that is common in western and northern Lake Urmia. We may also conclude that 24 pieces of this pottery found in Dinkha IV reached this old Assyrian-old Babylonian trading colony via trade.<sup>63</sup>

The other distinct ceramic tradition of northwestern Iran during this time span is Khabur Ware, found in bulk in Dinkha Tepe IV, but also reported in Hasanlu VI. This was an intrusive phenomenon unrelated to the earlier painted orange ware of Hasanlu VII. It is related instead to the Khabur Ware of northern Iraq and Syria (1900–1600 BC) and may present the easternmost extension of old Assyrian trade contacts.<sup>64</sup> With the beginning of the Late Bronze Age, Khabur Ware disappeared and Urmia Ware was the only tradition in the western part of Lake Urmia that continued until the beginning of the Iron Age.

## CONCLUSION

The first season of archaeological excavation in Kul Tepe primarily aimed to respond to some fundamental questions in areas such as the transition process from the Late Chalcolithic to Early Bronze Age, identifying different cultural horizons (including Kura-Araxes Culture I), and also

<sup>58</sup> Edwards 1981, p. 665; 1983, p. 72; 1986, p. 65.

<sup>59</sup> Edwards 1981.

<sup>60</sup> Edwards 1981 (Haftavan VIB); Burton-Brown 1951, Dyson 1968 (Geoy Tepe C/D); Hamlin 1974, pp. 129–130, Rubinson 1991 (Tepe Dinkhah IV); Burney 1961a, Summers 2013b (Yanik Tepe); Lippert 1976 (Kordlar); Alizadeh and Azarnoush 2003b (Tepe Baruj); Tala'i 1984 (Gol Tepe).

<sup>61</sup> Smith *et al.* 2009 (Georgia); Kushnareva 1986 (Azerbaijan); Abedi *et al.* 2009 (Armenia).

<sup>62</sup> Burney 1975.

<sup>63</sup> Rubinson 2004, p. 666.

<sup>64</sup> Hamlin 1974, pp. 129–130.

outlining cultural conditions in the region during prehistoric and historic periods. Based on the results of the first season of excavation, it was determined that Kul Tepe possessed cultural material from the Late Chalcolithic, Early, Middle, Late Bronze Age, Iron III, Urartian and Achaemenid periods. As a result of excavation of 24 m deposits revealed in Trenches II and III, it was found that 3.5 to 4 m of deposits belong to the Late Chalcolithic, 3.5 to 3 m to the Proto-Kura-Araxes and Kura-Araxes I, 13.5 to 13 m to the Kura-Araxes II and III, and 1 m to the Middle and Late Bronze Age (with typical Urmia Ware); finally, 1.5 m contains Iron III, Urartian and Achaemenid materials. With respect to questions propounded for this research, it seems essential to make reference to some interesting points. First, Kul Tepe is one of the few archaeological sites in northwestern Iran to possess cultural materials and layers without any gap between the Late Chalcolithic and Early Bronze Ages. These circumstances made it possible to study the cultural conditions in the region during the Late Chalcolithic, and consequently the manner of transition to and formation of the Proto-Kura-Araxes and Kura-Araxes I, II and III periods. Second, the excavation succeeded in distinguishing the regional situation during the Middle and Late Bronze Age as well as the Iron III, Urartian and Achaemenid periods. The studies accomplished showed that Kul Tepe passed through a transitional phase between the Chalcolithic and Bronze Ages and then entered into Kura-Araxes I, II and III, which contain traces of the Early Bronze Age.

Kul Tepe is located next to a broad valley, at the core of the highlands and the crossroads of major routes linking the Iranian plateau to Anatolia and the Caucasus to Northern Mesopotamia. This strategic location is further enhanced by the wealth in natural resources of the region, which boasts rich copper and salt deposits. A comparative analysis of data demonstrates that Kul Tepe had broad interregional relations with Northern Mesopotamia, the Jezireh region, the Upper Euphrates, Eastern Turkey, and some parts of Iran and the Caucasus during the Late Chalcolithic period. Likewise, in the Early Bronze Age, there are indications that Kul Tepe had cultural relations with sites in the Trans-Caucasus and Eastern Anatolia on the one hand and Lake Urmia Basin and Zagros on the other. The appearance of Urmia Ware testifies to the connection with Lake Urmia basin and the Caucasus region in the Middle and Late Bronze Age. Further, remains of Iron III are also comparable with Lake Urmia Basin, the Caucasus region and most sites in northwestern Iran.

What is more, in contrast to the situation usually attested in regard to many Kura-Araxes sites in the Caucasus, several settlements of the Araxes-Urmia region are characterised by thick Early Bronze Age occupation levels, suggesting that these settlements were occupied by sedentary groups over a long period. First of all, the great depth of the Early Bronze Age cultural layers in northwestern Iran and the Nakhichevan region attract attention; the cultural layer belonging to this period at Kul Tepe of Jolfa is 8–9 m thick, at Gijlar, 11 m, Tepe Yaldir, *ca.* 9 m, Yanik Tepe, 8 m, Geoytepe, 6 m, Kültepe I of Nakhichevan, 9.5 m, Kültepe II, 6.8 m, Aşagi Daşarx, 7 m, and Maxta, 4.6 m. This factor combined with the evidence of ceramic continuity between the Late Chalcolithic and the Early Bronze Age period in these places may indicate that this region can be considered the zone of the early emergence and formation of the Kura-Araxes culture.

Although we are presently in a much better position than before to discuss Chalcolithic, Bronze Age periods of NW Iran and its subsequent developments, there is still much to be learned about

the development and meanings of the material culture, the origin of Kura-Araxes culture and the processes of change and distribution patterns during 5<sup>th</sup>, 4<sup>th</sup> and 3<sup>rd</sup> millennium BC.

Available data, fresh C14 radiocarbon dates from recent excavations in NW Iran provide a welcome opportunity to rethink 5<sup>th</sup>, 4<sup>th</sup> and 3<sup>rd</sup> millennium BC chronology. From what is currently available, we suggest that the Dalma period lasted some 500 years, and dates to between ca. 5000-4500 cal. BC. During mid-fifth or slightly later (Post-Ubaid: 4500-4200 BC) black on buff so-called Pisdeli culture (LC1= Kul Tepe VII) was gradually replaced in the whole southern, western and northern regions of the Lake Urmia Basin. Late 5th millennium chaff-tempered or chaff-faced ware appears alongside Ubaid-related black on buff during LC2-3 (Kul Tepe VIB and VIA, Dava goz III: 4200-3800 BC) in NW Iran.

To sum up, the emerging picture suggests that the CFW system, whose focus was the highlands, was progressively challenged during the 4<sup>th</sup> millennium in the North as in the South, respectively by the Kura-Araxes and the Uruk expansions. After a period of coexistence with both, the CFW culture was superseded in the highlands by the Kura-Araxes phenomenon, whose driving forces probably had some decisive advantage over its regional neighbors: judging by the importance of metallurgy and mining activities in the Kura-Araxes world, this advantage could be technology.<sup>65</sup>

## References

- Abedi, A.  
 2014 "Kura-Araxes Culture and NW Iran after Yanik: New Perspectives from Excavations and Surveys", *Paleorient*.  
 2012 "Dava Goz Khoy Excavation: First Preliminary Report", Unpublished report prepared for ICHHTO (In Persian).  
 2011 *Study and Analysis of Archaeological Material of Kul Tepe-ye Jolfa and Comparative Analytical Comparison of its Data with Adjacent Regions*. Unpublished MA diss. University of Tarbiat Modares, Tehran.
- Abedi, A., Omrani, B.,  
 2013 "5<sup>th</sup> Millennium B.C. in NW Iran: Dalma and Pisdeli Once Again, in *A new look at old routes in Western Asia: Rethinking Iran in the 5th millennium BCE*, Berlin: May 31 - 2 June.
- Abedi, A., Omrani, B. and Eskandari, N.  
 2009 "Kul Tapeh: An Early Bronze Age site in north-western Iran," *Antiquity* 83, no. 322. Available at: <http://antiquity.ac.uk/projgall/abedi322/>.
- Achundov T.  
 2007 "Sites des migrants venus du Proche-Orient en Transcaucasie," in *Les cultures du Caucase (VIe - IIIe millénaires avant notre ère). Leurs relations avec le Proche Orient*, edited by B. Lyonnet, pp. 95-122. Paris: Éditions Recherche sur les Civilisations, CNRS Éditions.  
 2011 "Archaeological sites of the Mugan Steppe and prerequisites for agricultural settlement in the South Caucasus in the Neolithic- Eneolithic", *Stratum plus* (2), pp. 219-236.

<sup>65</sup> Marro 2010.

Akkermans, P. M. M. G.

- 1988a "The Period IV pottery," in *Hammam et-Turkman I: Report on the University of Amsterdam's 1981-1984 Excavation in Syria I* (Publications de l'Institut Historique-Archéologique Néerlandais à Stamboul, 63), edited by M. N. van Loon, pp. 181-285. Leiden: Nederlands Instituut voor het Nabije Oosten.
- 1988b "The Period V pottery," in *Hammam et-Turkman I: Report on the University of Amsterdam's 1981-1984 Excavation in Syria I* (Publications de l'Institut Historique-Archéologique Néerlandais à Stamboul, 63), edited by M. N. van Loon, pp. 287-349. Leiden: Nederlands Instituut voor het Nabije Oosten.

Alizadeh, K.

- 2014 "Approaches to Social Complexity in Kura-Araxes Culture: a View from Köhne Shahar (Ravaz) in Chaldiran, Iranian Azerbaijan," *Paleorient*.
- 2007 "Excavation at Nader Tepesi: Aslanduz, Mughan Steppe," in *Proceedings of the 9<sup>th</sup> International Annual Symposium on Iranian Archaeology* (Archaeological Reports 7), Vol. 2, pp. 25-34. Tehran: Iranian Center for Archaeological Research (In Persian).
- 2001 *Study of Cultural Relationship between the North and the South of Araxes River: Systematic Survey of Tepe Baruj (Motale'e-ye Ravabet-e Farhangi-ye do suy-e Rud-e Aras: Barresi-ye Raveshmand-e Tappe-ye Baruj)*. Unpublished MA dissertation, University of Tehran (in Persian).

Alizadeh, K. and Azarnoush, M.

- 2003a "Systematic survey of Tepe Baruj: Sampling method and statistical results (Barresi-ye Raveshmand-e Tappe-ye Baruj: Ravesh-e Numunebardari va Natayej-e Amari)," *Iranian Journal of Archaeology and History* 33: 4-25. (In Persian with English summary)
- 2003b "Systematic survey of Baruj Tepe: Cultural relationship between the south and the north of the Araxes River (Barasiy-e Raveshmand-e Tapeh Baruj: Ravabet-e Farhangi-e do soye Rood-e Aras)," *Iranian Journal of Archaeology and History* 34: 3-21. (In Persian with English summary)

Alizadeh, K. and Ur, J. A.

- 2007 "Formation and destruction of pastoral and irrigation landscapes on the Mughan Steppe, north-western Iran," *Antiquity* 81: 148-160.

Azarnoush, M., Khatib Shahidi, H. and Rezaloo, R.

- 2006 "Reviewing the chronology of northwestern Iran in the Bronze Age, case study: Qalla Khosrow," *The International Journal of Humanities* 13, no. 3: 1-15.

Bakhshaliyev, V. and Marro, C.

- 2009 *The Archaeology of Nakhichevan: Ten Years of New Discoveries*. Istanbul: Ege Yayinlari.

Bakhshaliyev, V., Ashurov, S. and Marro, C.

- 2009 "The excavations of Ovçular Tepesi (2006-2008): First results and new perspectives," in *Azerbaijan — Land between East and West: Transfer of Knowledge And Technology During the "First Globalization" of the VIIth - IVth Millennium BC: International Symposium Baku*, edited by N. Helwing, pp. 19-24. Berlin: Deutsches Archäologisches Institut, Eurasien-Abteilung.

Bakhshaliyev, V., Marro, C. and Ashurov, S.

- 2010 *Ovçulartepesi: (2006-2008 — ci il tadqiqatlarinin ilk naticalari / First Preliminary Report: the 2006-2008 Seasons)*. Baki: Elm.

Batiuk, S. and Rothman, M. S.

- 2007 "Early Transcaucasian cultures and their neighbours", *Expedition* 49, no. 1: 7-17.

- Belgiorno, M. R., Biscione, R. and Pecorella, P. E.  
 1984 "Il Saggio E I Materiali Di Tappeh Gijlar," in *Tra Lo Zagros e L'Urmia: Ricerche Storiche ed Archeologiche nell'Azerbaijan Iraniano*, edited by P. E. Pecorella and M. Salvini, pp. 240–299. Rome: Edizioni dell'Ateneo.
- Biscione R., Khatib-Shahidi, H.  
 2006 "Italian-Iranian archaeological survey in Eastern Azerbaijan," *Studi Micenei ed Egeo-Anatolici* 48, pp. 302–306
- Braidwood, R. and Braidwood, L.  
 1960 *Excavations in the Plain of Antioch I. The Earlier Assemblages, Phases A-J*. Chicago: The University of Chicago Press.
- Burney, C. A.  
 1961a "Excavations at Yanik Tepe, north-west Iran," *Iraq* 23: 138–153.  
 1961b "Circular buildings found at Yanik Tepe, in north-west Iran," *Antiquity* 35: 237–240.  
 1962 "The excavations at Yanik Tepe, Azerbaijan, 1961 Second Preliminary Report," *Iraq* 24: 134–152.  
 1964 "The excavations at Yanik Tepe, Azerbaijan, 1962: Third Preliminary Report," *Iraq* 26: 54–61.  
 1970a "Excavations at Haftavan Tepe 1968: First preliminary report," *Iran* 8: 157–171.  
 1970b "Haftavan Tepe," in "Survey of excavations in Iran during 1968–69," *Iran* 8: 182–183.  
 1972 "Excavations at Haftavan Tepe 1969: Second preliminary report," *Iran* 10: 127–142.  
 1973 "Excavation at Haftavan Tepe 1971: Third preliminary report," *Iran* 11: 153–172.  
 1974 "Report on the 1973 season of excavations at Haftavan Tepe," in *Proceedings of the 2nd Annual Symposium on Archaeological Research in Iran, 1973*, edited by F. Bagherzadeh, pp. 102–111. Tehran: Iranian Center for Archaeological Research.  
 1975 "Excavations at Haftavan Tepe 1973: Fourth preliminary report," *Iran* 13: 149–164.  
 1976a "The Fifth Season of Excavation at Haftavan Tepe: Brief Summary of Principal Results," in *Proceedings of the IVth Annual Symposium on Archaeological Research in Iran, 1975*, edited by F. Bagherzadeh, pp. 257–271. Tehran: Iranian Center for Archaeological Research.  
 1976b "Haftavan Tepe," in "Survey of excavations in Iran: 1974–75," *Iran* 14: 157–158.  
 1979a "Haftavan Tepe," in "Survey of excavations in Iran: 1978," *Iran* 17: 150.  
 1979b "Mashkinshahr survey," in "Survey of excavations in Iran," *Iran* 17: 155–156.
- Burney, C. A. and Lang, D. M.  
 1971 *The Peoples of the Hills: Ancient Ararat and Caucasus*. London: Weidenfeld & Nicolson.
- Burton-Brown, T.  
 1951 *Excavation in Azarbaijan, 1948*. London: John Murray.
- Dyson, R. H.  
 1958 "Iran, 1957: Iron Age Hasanlu," *The University Museum Bulletin* 22, no. 2: 25–32.  
 1965 "Problems of Protohistoric Iran as seen from Hasanlu," *Journal of Near Eastern Studies* 24: 193–217.  
 1967a "Dinkha Tepe," in "Survey of excavations in Iran during 1965–66," *Iran* 5: 136–137.  
 1967b "Early Cultures of Solduz, Azerbaijan," in *A Survey of Persian Art. Proceedings of the IVth International Congress of Iranian Art and Archaeology, part A, New York, 1960*, Vol. 14, edited by A. U. Pope, pp. 2951–2970. Tehran: Asia Institute of Pahlavi University.  
 1968 *The Archaeological Evidence of the Second Millennium B.C. on the Persian Plateau*. Cambridge: Cambridge University Press.  
 1972 "The Hasanlu project, 1961–1967," in *The Memorial Volume of the Vth International Congress of Iranian Art and Archaeology 1968*, Vol. 1, pp. 39–58. Tehran: Ministry of Culture and Arts.

- 1989 "The Iron Age architecture at Hasanlu: An essay," *Expedition* 31, no. 2-3: 107-127.
- 1999 "The Achaemenid painted pottery of Hasanlu IIIA," *Anatolian Studies* 49: 101-110.
- Dyson, R. H. and Muscarella, O.W.
- 1989 "Constructing the chronology and historical implications of Hasanlu IV," *Iran* 27: 1-27.
- Dyson, R. H. and Young, T. C.
- 1960 "The Solduz Valley, Iran: Pisdeli Tepe," *Antiquity* 34: 19-28.
- Edwards, M. R.
- 1981 "The pottery of Haftavan VIB (Urmia ware)," *Iran* 19: 101-140.
- 1983 *Excavations in Azerbaijan (North-western Iran)*, Vol. 1. *Haftavan, Period VI* (British archaeological reports, International series, 182). Oxford: Archaeopress.
- 1986 "'Urmia Ware' and its distribution in north-western Iran in the second millennium B.C.: A review of the results of excavations and surveys," *Iran* 24: 57-77.
- Gillespie, R., Gowlett, J. A. J., Hall, E. T. and Hedges, R. E. M.
- 1985 "Radiocarbon dates from the Oxford AMS system: Archaeometry Datelist 2," *Archaeometry* 27(2): 237-246.
- Gülçur, S.
- 2000 "Norşuntepe: die chalkolitischen Keramik (Elazığ/Ost Anatolien)," in *Chronologies des Pays du Caucase et de l'Euphrate aux IVème-IIIème Millénaires* (Varia Anatolica 11), edited by C. Marro and H. Hauptmann, pp. 375-418. Paris: De Boccard.
- Gut, R. V.
- 1995 *Das Prähistorische Ninive, Zur relativen Chronologie der frühen Perioden Nordmesopotamiens* (Baghdader Forschungen 19). Mainz am Rhein: Philipp von Zabern.
- Hamlin, C.
- 1974 "The early second millennium ceramic assemblage of Dinkha Tepe," *Iran* 12: 125-153.
- 1975 "Dalma Tepe," *Iran* 13: 111-127.
- Helwing, B.
- 2004 "The Late Chalcolithic period in the Northern Zagros: A reappraisal of the current status of research," in *Proceedings of the International Symposium on Iranian Archaeology: Northwestern Region*, edited by M. Azarnoush, pp. 11-24. Tehran: Pizhūhishkadeh-i Bāstān'shināsī, Pizhūhishgāh-i Mīrās-i Farhangī va Gardishgari.
- 2012 "Late Chalcolithic craft traditions at the North-Eastern 'periphery' of Mesopotamia: potters vs. smiths in the Southern Caucasus," *Origini* 24: 193-212.
- Hughes, R. E.
- 2010 "Determining the geologic provenance of tiny obsidian flakes in archaeology using nondestructive EDXRF," *American Laboratory* 42: 27-31.
- Ingraham, M. L. and Summers, G.
- 1979 "Stelae and settlements in Meshkin Shahr Plain, northeastern Azerbaijan, Iran," *Archäologische Mitteilungen aus Iran* 12: 67-101.
- Kambakhsh Fard, S.
- 1967 *Gozarash-e Barrasiha va Tahghigat, Gozarash-e Gaharom, Azarbaijan-e Sharghi, Tehran, Markaz-e Asnad va Madarek-e Sazman-e Mirase-e Farhangiy-e Keshvar*. Unpublished report. (In Persian)



- Kargar, B.  
 2005 "Qalaychi Zirtu: Mannaeen capital," in *Proceedings of the International Symposium on Iranian Archaeology: Northwestern Region*, edited by M. Azarnoush, pp. 229–245. Tehran: Pizhūhishkadah-i Bāstān'shināsī, Pizhūhishgāh-i Mīrās-i Farhangī va Gardishgarī. (In Persian with English summary)
- Kargar, B. and Binandeh, A.  
 2009 "A preliminary report of excavations at Rabat Tepe, northwestern Iran," *Iranica Antiqua* 44: 113–129.
- Kearnton, R. R. B.  
 1969 "Survey in Azerbaijan," in "Survey of excavations in Iran, 1967–8," *Iran* 7: 186–187.  
 1970 *A Study of Settlement in the Salmas Valley, West Azerbaijan, Iran*. Manuscript in the files of the Hasanlu Project. Philadelphia: University Museum, University of Pennsylvania.
- Khademi Nadooshan, F., Abedi, A., Glascock, M. D., Eskandari, N. and Khazaei, M.  
 2013 "Provenance of prehistoric obsidian artefacts from Kul Tepe, northwestern Iran using X-ray Fluorescence (XRF) analysis," *Journal of Archaeological Science* 40, no. 4: 1956–1965.
- Khatib Shahidi, H. and Abedi, A.  
 2011 *Excavation at Kul Tepe of Jolfa*. Unpublished report prepared for ICHHTO. (In Persian)
- Khatib Shahidi, H. and Biscione, R.  
 2007 "Iranian-Italian Archaeological Survey in Eastern Azerbaijan," in *Proceedings of the 9th Annual Symposium on Iranian Archaeology*, Vol. 2 (Archaeological Reports 7), pp. 25–34. Tehran: Research Center for ICHHTO.
- Khazaei, M., Glascock, M. D., Masjedi, P., Abedi, A. and Nadooshan, F. K.  
 2011 "The origins of obsidian tools from Kul Tepe, Iran," *International Association for Obsidian Studies Bulletin* 45: 14–18.
- Kiguradze, T.  
 2000 "The Chalcolithic-Early Bronze transition in the Eastern Caucasus," in *Chronologies des Pays du Caucase et de l'Euphrate aux IVème-IIIème Millénaires* (Varia Anatolica 11), edited by C. Marro and H. Hauptmann, pp. 321–328. Paris: De Boccard.
- Kiguradze, T. and Sagona, A.  
 2003 "On the origins of the Kura-Araxes cultural complex," in *Archaeology in the Borderlands. Investigations in Caucasia and Beyond* (Monograph, Cotsen Institute of Archaeology at UCLA, 47), edited by A. Smith and K. Robinson, pp. 38–94. Los Angeles: Cotsen Institute of Archaeology, University of California.
- Kleiss, W. and Kroll, S.  
 1979 "Ravaz und Yakhvali, Zwei Befestigte Plätze des 3. Jahrtausends," *Archäologische Mitteilungen aus Iran* 12: 27–47.  
 1992 "Survey in Ost-Azarbaidjan 1991," *Archäologische Mitteilungen aus Iran* 25: 1–46.
- Kohl, P.  
 2007 *The Making of Bronze Age Eurasia*. Cambridge: Cambridge University Press.
- Kroll, S.  
 1984 "Archäologische Fundplätze in Iranisch-Ost-Azarbaidjan," *Archäologische Mitteilungen aus Iran* 17: 13–133.  
 1990 "Der Kul-tepe bei Marand: Eine chalcolithische Siedlung in Iranisch-Azarbaidjan," *Archäologische Mitteilungen aus Iran* 23: 59–71.

- 1994 *Festungen und Siedlungen in Iranisch-Azarbaidjan. Untersuchungen zur Siedlungs- und Territorialgeschichte des Urmia-See-Gebietes in vor-islamischer Zeit*. Prof. thesis, Ludwig-Maximilians-Universität München (Munich 1994).
- 2005 "Early Bronze Age settlement patterns in the Orumiye Basin," in *Mountains and Valleys. A symposium on highland-lowland interaction in the Bronze Age settlement system of Eastern Anatolia, Transcaucasia and Northwestern Iran* (AMIT 37), edited by B. Helwing and A. Özfirat, pp. 115–121.
- Kromer, K. and Lippert, A.  
 1976 "Die Österreichischen Ausgrabungen am Kordlar Tepe in Aserbaidshen," *Mitteilungen der Anthropologischen Gesellschaft in Wien* 106: 65–82.
- Kushnareva, K. Kh.  
 1986 "Uzelik Tepe," in *Azerbaijan Soviet Ensiklopedia*, edited by J. B. Guliyev. Baku.  
 1997 *The Southern Caucasus in Prehistory: Stages of Cultural and Socioeconomic Development from the Eighth to the Second Millennium BC* (University Museum Monograph, 99). Translated by H. N. Michael. Philadelphia: University of Pennsylvania Museum.
- Lippert, A.  
 1976 "Vorbericht der Österreichischen Ausgrabungen am Kordlar Tepe in Persisch-Aserbaidshen: Kampagne 1974," *Mitteilungen der Anthropologischen Gesellschaft in Wien* 106: 83–122.
- Lyonnet, B.  
 2007b "La culture du Maikop, la Transcaucasie, l'Anatolie orientale et le Proche-Orient: relations et chronologie," in *Les cultures du Caucase (VIe - IIIe millénaires avant notre ère). Leurs relations avec le Proche Orient*, edited by B. Lyonnet, pp. 133–162. Paris: Éditions Recherche sur les Civilisations, CNRS Éditions.
- Lyonnet, B., Achundov, T., Almamedov, K., Bouquet, L., Courcier, A., Jellilov, B., Huseynov, F., Loute, S., Makharadze, Z., Reynard, S.  
 2008 "Late Chalcolithic Kurgans in Transcaucasia. The cemetery of Soyuq Bulaq (Azerbaijan)," *Archäologische Mitteilungen aus Iran und Turan* 40: 27–44.
- Lyonnet, B., Guliyev, F.  
 2012 "Recent Research on the Chalcolithic Period in Western Azerbaijan," in *Proceedings of the 7th ICAANE, London 2010*, edited by R. Matthews and J. Curtis. Wiesbaden: Harrassowitz.
- Marro, C.  
 2010 "Where did Late Chalcolithic chaff-faced ware originate? Cultural dynamics in Anatolia and Transcaucasia at the dawn of urban civilization (ca 4500–3500 BC)," *Paléorient* 36(2): 35–55.  
 2012 ed. forthcoming "The 'Post-Ubaid' Horizon in the Fertile Crescent", *Varia Anatolica*, Istanbul.
- Marro, C. and Özfirat A.  
 2005 "Pre-classical survey in Eastern Turkey: First preliminary report: the Ağı Dag (Mount Ararat) region," *Anatolia Antiqua* 11: 385–422.
- Marro, C., Bakhshaliyev, V. and Ashurov, S.  
 2011 "Excavations at Ovcular Tepesi (Nakhchivan, Azerbaijan): Second preliminary report: The 2009–2010 Seasons," *Anatolia Antiqua* 19: 53–100.
- Maziar, S.  
 2010 "Excavations at Kohneh Pasgah Tepesi, the Araxes Valley, northwest Iran: First preliminary report," *Ancient Near Eastern Studies* 47: 165–193.

Müseyibli, N.

2007 *Böyük Kəsik. Eneolit dövrü yaşayış məskəni*. Bakı.

Niknami, K.

2011 *Excavation at Zardkhaneh of Ahar: First Preliminary Report*. Unpublished report prepared for ICHHTO. (In Persian)

Nobari, A.

2000 *Excavation at Iron Age Cemetery of Masjid Kabood Tabriz: Second Preliminary Report*. Unpublished report prepared for ICHHTO. (In Persian)

2004 "The position of Masjid Kabood excavations in Iron Age studies in Iran: Comparative analysis of its materials with contemporaneous sites," in *Proceedings of the International Symposium on Iranian Archaeology: Northwestern Region*, edited by M. Azarnoush, pp. 265–276. Tehran: Iranian Center for Archaeological Research. (In Persian)

Nobari, A. and Purfaraj, A.

2005 "The investigation of cultural relationships of Ardebil province with north and northeastern Iran in Neolithic and Chalcolithic periods: Based on archaeological data of Ghosha Tepe in Shahar Yeri," in *Abstracts of the International Symposium on Iranian Archaeology: Northern and Northeastern Regions*, p. 304. Tehran: Iranian Center for Archaeological Research.

Oates, J.

1983 "Ubaid Mesopotamia reconsidered," in *The Hilly Flanks And Beyond: Essays on the Prehistory of Southwestern Asia* (Studies in ancient oriental civilization, 36), edited by R. H. Braidwood, pp. 251–282. Chicago: Oriental Institute of the University of Chicago.

Omrani, B.

1994 *Simay-e bastanshenasi-e shargh-e daryachey-e Urmia az dorey-e nosangi ta asr-e aban, payanname-e karshenasiearshad bastanshenasi, daneshkade adebiat, daneshga-e Tehran*. Unpublished MA diss, University of Tehran. (In Persian with English summary)

2006 *Early Bronze Age in NW Iran*. Unpublished PhD diss. University of Tarbiat Modares, Tehran. (In Persian with English abstract)

Omrani, B., Khatib Shahidi, H. and Abedi, A.

2012 "Early Bronze Age, New Migrants and the Beginning of Township in Azerbaijan, NW Iran," *Iranica Antiqua* 47: 1–28.

Palumbi, G.

2008 *The Red and Black: Social and Cultural Interaction between the Upper Euphrates and Southern Caucasus Communities in the Fourth and Third Millennium B.C.* (Studi di preistoria orientale, 2). Rome: Sapienza Università.

Pecorella, P. E. and Salvini, M.

1984 *Tra Lo Zagros e L'Urmia: Ricerche Storiche ed Archeologiche nell'Azerbaigian Iraniano*. Rome: Edizioni dell'Ateneo.

Reimer, P. J., Baillie, M. G. L., Bard, E., Bayliss, A., Beck, J. W., Bertrand, C., Blackwell, P. G., Buck, C. E., Burr, G., Cutler, K. B., Damon, P. E., Edwards, R. L., Fairbanks, R. G., Friedrich, M., Guilderson, T. P., Hughen, K. A., Kromer, B., McCormac, F. G., Manning, S., Bronk Ramsey, C., Reimer, R. W., Remmele, S., Southon, J. R., Stuiver, M., Talamo, S., Taylor, F. W., van der Plicht, J. and Weyhenmeyer, C. E.

2004 "IntCal04 Terrestrial Radiocarbon Age Calibration, 0–26 cal kyr BP," *Radiocarbon* 46: 1029–1058.

- Reimer, P. J., Baillie, M. G. L., Bard, E., Bayliss, A., Beck, J. W., Blackwell, P. G., Bronk Ramsey, C., Buck, C. E., Burr, G. S., Edwards, R. L., Friedrich, M., Grootes, P. M., Guilderson, T. P., Hajdas, I., Heaton, T. J., Hogg, A. G., Hughen, K. A., Kaiser, K. F., Kromer, B., McCormac, F. G., Manning, S. W., Reimer, R. W., Richards, D. A., Southon, J. R., Talamo, S., Turney, C. S. M., van der Plicht, J. and Weyhenmeyer, C. E.
- 2009 "IntCal09 and Marine09 radiocarbon age calibration curves, 0-50,000 years cal BP," *Radiocarbon* 51(4): 1111-1150.
- Rothman, M. S.
- 2002 *Tepe Gawra: The Evolution of a Small Prehistoric Center in Northern Iraq* (University Museum Monograph, 112). Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.
- 2003 "Ripples in the stream: Transcaucasia-Anatolian interaction in the Murat/Euphrates Basin at the beginning of the third millennium B.C.," in *Archaeology of the Borderlands: Investigations in Caucasia and Beyond* (Monograph, Cotsen Institute of Archaeology at UCLA, 47), edited by A. T. Smith and K. S. Robinson, pp. 95-110. Los Angeles: Cotsen Institute of Archaeology.
- 2005 "Transcaucasians: Settlement, migration, and trade in the Kura-Araxes periods," *Archäologische Mitteilungen aus Iran und Turan* 37: 53-62.
- Rubinson, K. S.
- 1991 "A mid-second millennium tomb at Dinkha Tepe," *American Journal of Archaeology* 95: 373-395.
- 2004 "Dinkha Tepe, Iran, and so-Called Urmia Ware," in *A view from the Highlands: Archaeological Studies in Honour of Charles Burney* (Ancient Near Eastern Studies Supplement, 12), edited by A. Sagona, pp. 661-676. Leuven: Peeters.
- Sagona, A. G.
- 1984 *The Caucasian Region in the Early Bronze Age* (BAR international series, 214), 3 Vols. Oxford: Archaeopress.
- 1993 "Settlement and society in late prehistoric Trans-Caucasus," in *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicata*, edited by M. Frangipane, pp. 453-474. Rome: La Sapienza.
- Sagona, A. G. and Zimansky, P. E.
- 2009 *Ancient Turkey*. London: Routledge.
- Seyidov, A. G.
- 2000 *Nakhichevanin İlk Tunc Dovru Abidalari va Onlari Dovralasdirmasi*. Baku: Casioglu Matbassi.
- 2003 *Nahçıvan VII-II Minillikde*. Baku: Elm.
- Smith, A.T., Badalyan, R.S. and Avetisyan, P.
- 2009 *The Archaeology And Geography Of Ancient Transcaucasian Societies*. Vol. 1. *The Foundations of Research and Regional Survey in the Tsaghkahovit Plain, Armenia*. Chicago: Oriental Institute Press.
- Solecki, R. S.
- 1969 "Survey in Western Azerbaijan," *Iran* 7: 189-190.
- Solecki, R. L. and Solecki, R. S.
- 1973 "Tepe Sevan: A Dalma period site in the Margavar valley, Azerbaijan, Iran," *Bulletin of the Asia Institute of Pahlavi University* 3: 98-117.
- Summers, G. D.
- 2013a "The Early Bronze Age in Northwestern Iran," in *The Oxford Handbook of Ancient Iran*, edited by D. T. Potts, pp. 161-178. Oxford: Oxford University Press.

2013b *Yanik Tepe, Northwestern Iran: The Early Trans-Caucasian Period: Stratigraphy and Architecture*. Leuven: Peeters.

Swiny, S.

1975 "Survey in north-west Iran 1971," *East and West* 25: 77–96.

Tala'i, H.

1984 "Notes on new pottery evidence from the Eastern Urmia Basin: Gol Tepe," *Iran* 22: 151–156.

Voigt, M. M.

1983 *Hajji Firuz Tepe: The Neolithic Settlement* (Hasanlu Excavation Reports, Vol. 1; University Museum Monograph 50). Philadelphia: University of Pennsylvania.

Voigt, M. M. and Dyson, R. H. Jr.

1992 "The Chronology of Iran, ca. 8000–2000 B.C.," in *Chronologies in Old World Archaeology*, 3<sup>rd</sup> edition, edited by R. W. Ehrich, pp. 122–178. Chicago: University of Chicago Press.

Akbar ABEDI (corresponding author), Kamalaldin NIKNAMI, Nasir ESKANDARI,

Alireza PIRMOHAMMADI, Javad HOSEINZADEH

Department of Archaeology, University of Tehran, Iran

E-mail: akbar.abedi@ut.ac.ir;

kniknami@ut.ac.ir;

nasir.eskandari@ut.ac.ir;

a.pirmohammadai@ut.ac.ir;

javadhoseinzadeh@gmail.com

Hamid KHATIB SHAHIDI

Department of Archaeology, University of Tarbiat Modares, Iran

E-mail: hamid\_khatib\_shahidi@yahoo.com

Christine CHATAIGNER

Lumière University, Maison de l'Orient Méditerranéen, 7 r. Raulin, 69007 Lyon, France

E-mail: christine.chataigner@mom.fr

Mehdi KAZEMPOUR

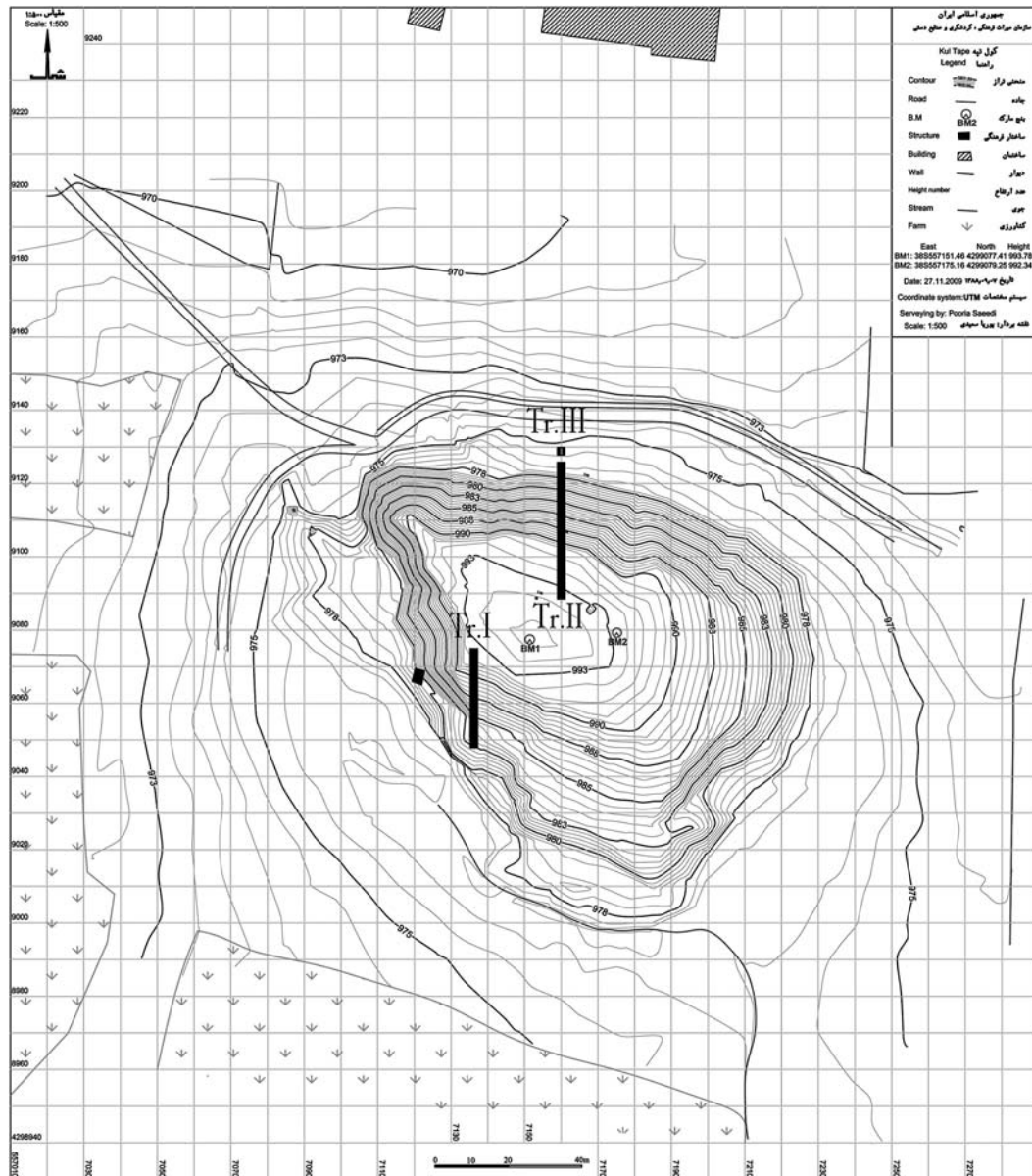
Department of Archaeology, University of Mohaghegh Ardebili, Iran

E-mail: m.kazempour63@gmail.com



Fig. 1. 1 General view of Kul Tepe, View from North;  
2. Map showing the locations of Kul Tepe with the sites mentioned in the text.





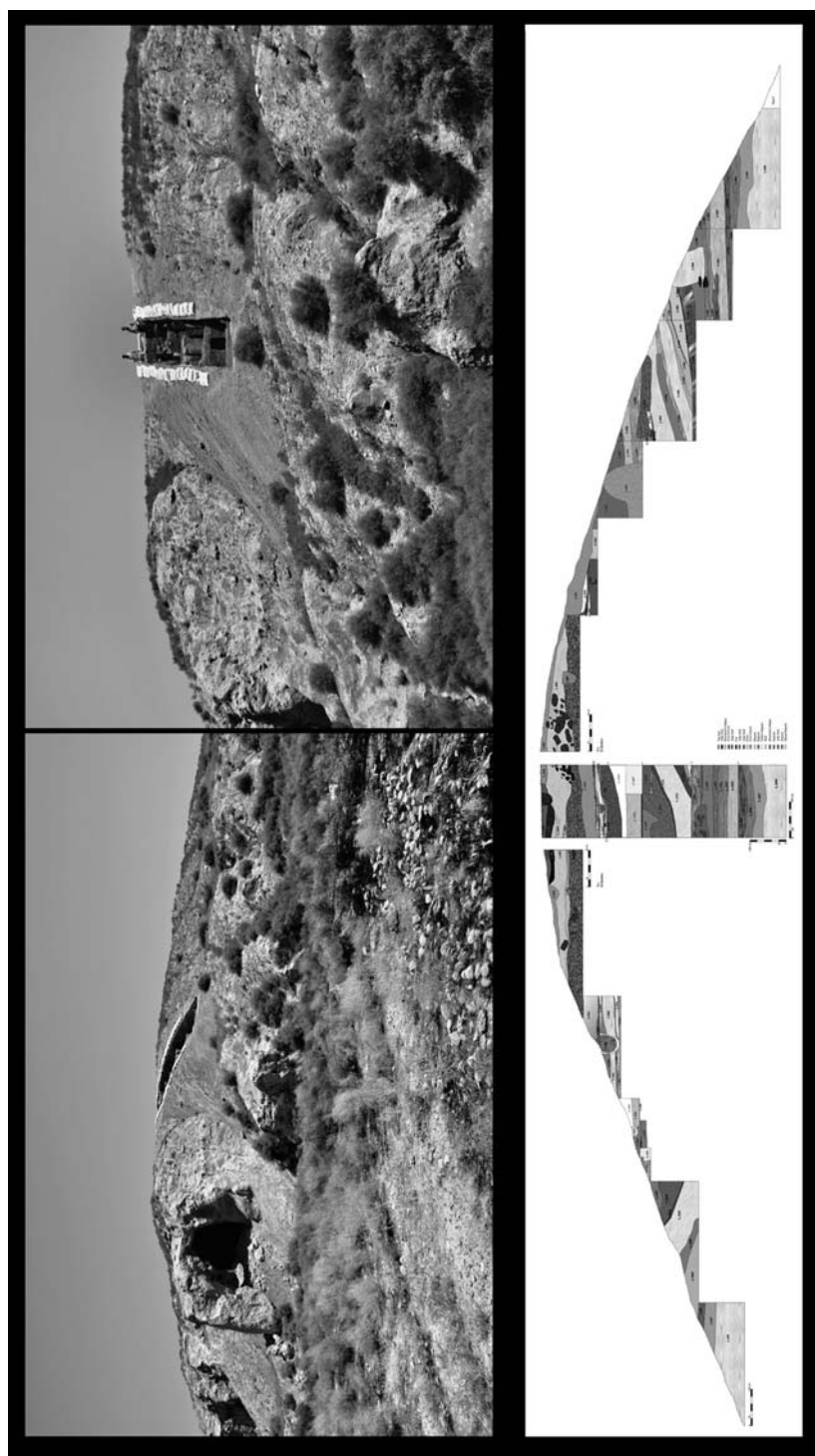


Fig. 3- Step Trench I; Stratigraphic Section of Trench I Sounding.

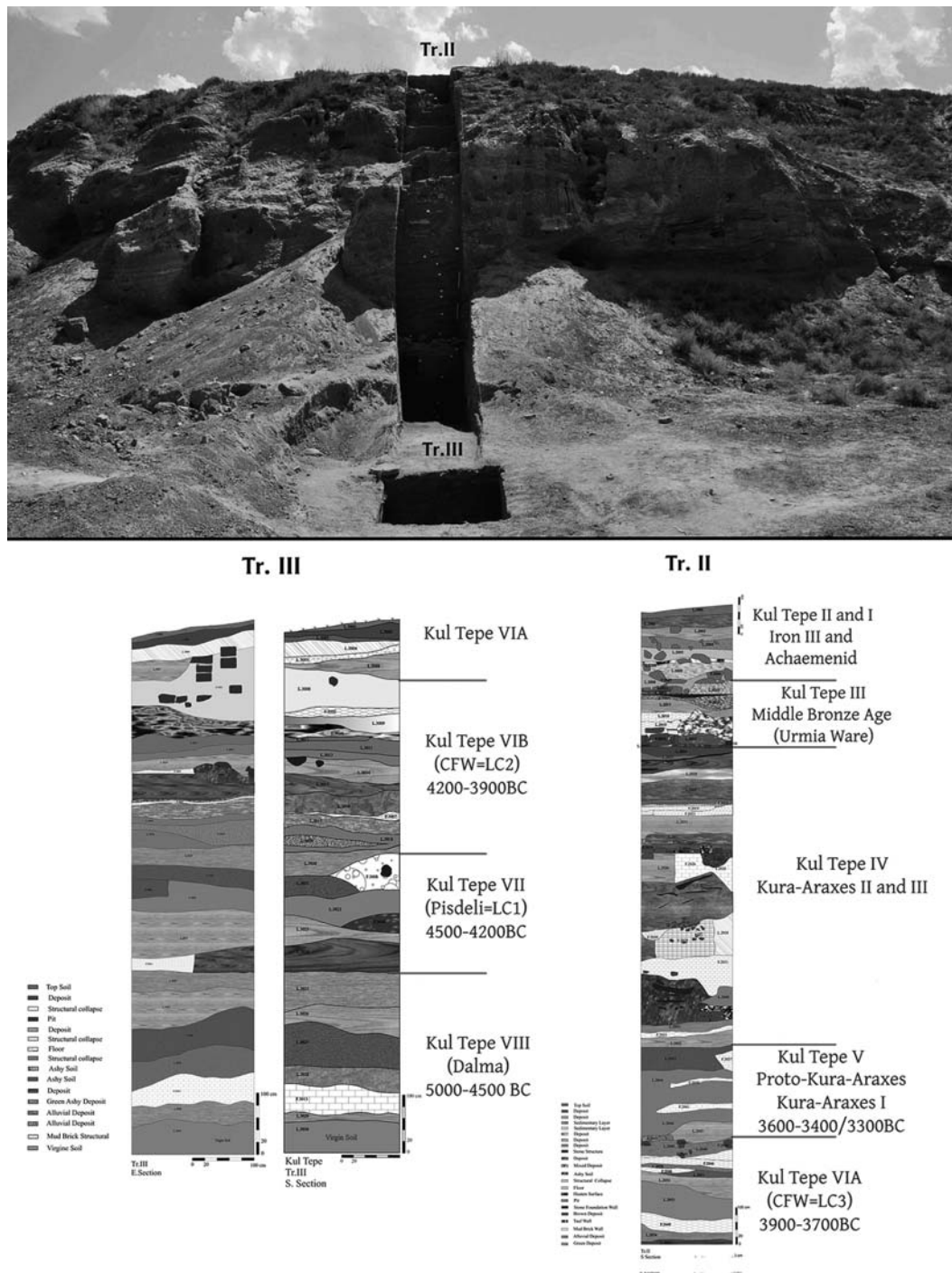


Fig. 4. Step Trench II and Deep Trench III; Stratigraphic Section of Trenches II and III Soundings.



Fig. 5. Sample of the 2010 Kul Tepe Excavation's Locus Sheet (Designed by A. Javanmardzadeh).

Fig. 5. Sample of the 2010 Kul Tepe Excavation's Locus Sheet (Designed by A. Javanmardzadeh).

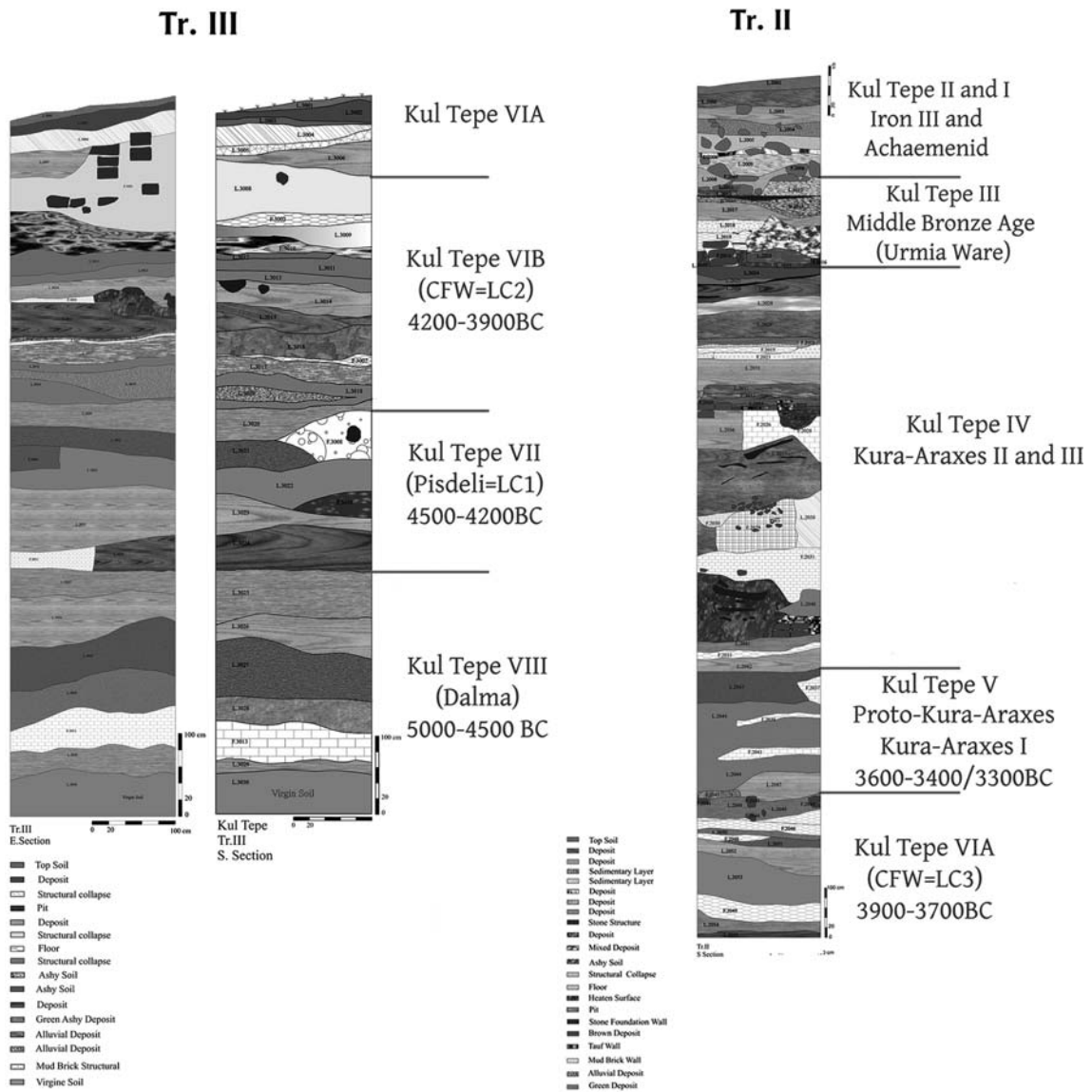


Fig. 6. Sequence of Kul Tepe According to 2010 Excavation.

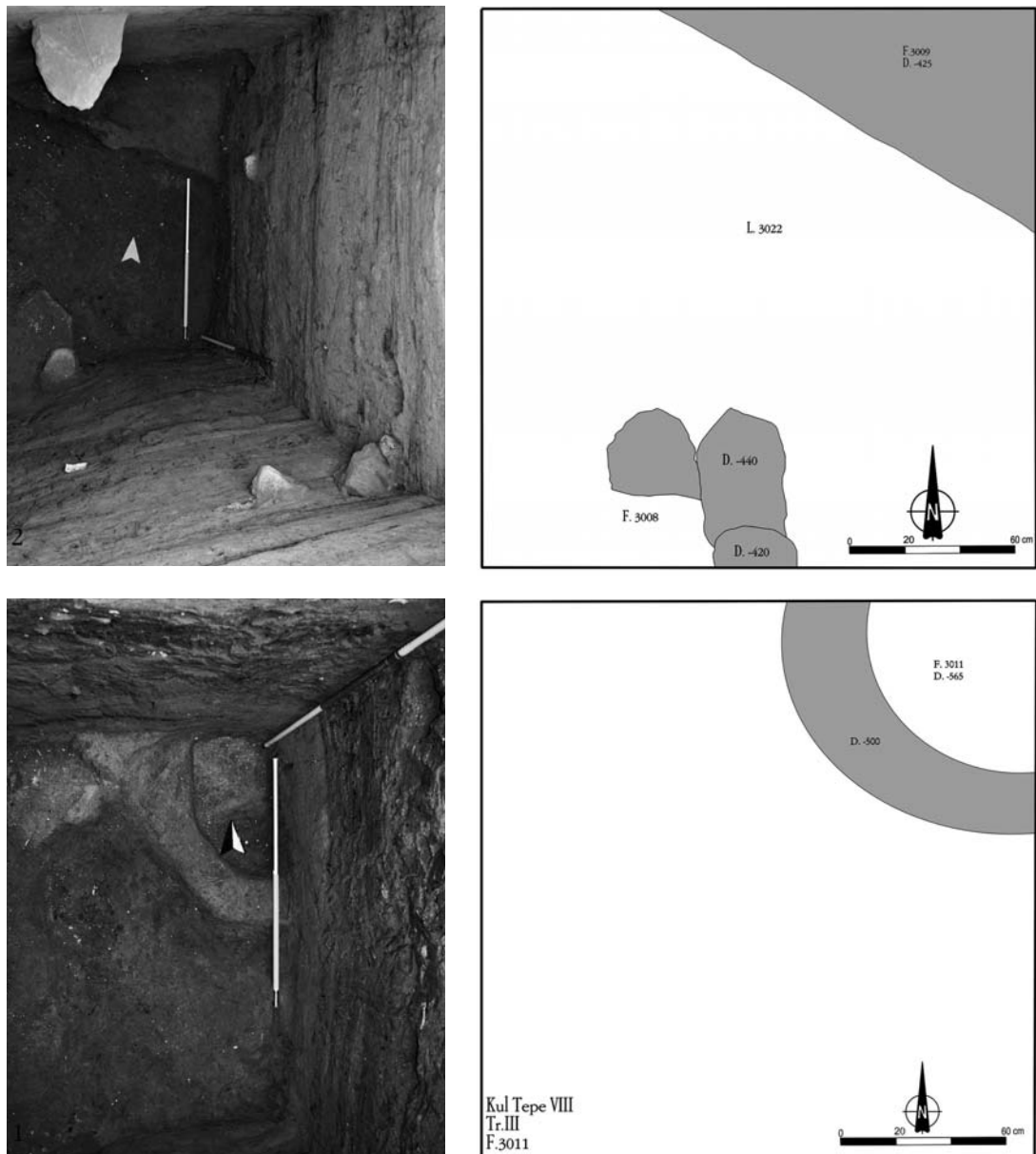


Fig. 7. 1 Kul Tepe VIII: F.3011, Trench III. Semi-Subterranean Circular Structure;  
2 Kul Tepe VII: F.3008-3009, Trench III. Mud-brick Structure with Stone Foundation.



### Kul Tepe VIII (Dalma Period)

Fig. 8

1. Kul Tepe VIII (Dalma painted ware); Loc. 3028: rim fragment of a typical holmouth open bowl; fine textured; HM; reddish brown 2.5 YR 5/4; burnished on the exterior and interior; mixed inclusions; well-fired.
2. Kul Tepe VIII (Dalma painted ware); Loc. 3028: rim fragment of a holmouth open bowl; fine textured; HM; red 10 R 4/8; burnished on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VIII (Dalma painted ware); Loc. 3028: body fragment of a bowl; fine textured; HM; very pale brown 10 YR 7/3; slipped on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VIII (Dalma painted ware); Loc. 3027: everted rim fragment of a cup; fine textured; HM; reddish brown 5 YR 5/4; washed on the exterior and interior; mixed inclusions; under-fired.
5. Kul Tepe VIII (Dalma painted ware); Loc. 3027: everted rim fragment of jar with short neck: abstract animal design; fine textured; HM; reddish yellow 5 YR 6/6; washed on the exterior and interior; mixed inclusions; well-fired.
6. Kul Tepe VIII (Dalma painted ware); Loc. 3027: everted rim fragment of jar with short neck; fine textured; HM; red 2.5 YR 5/6; washed on the exterior and interior; mixed inclusions; under-fired.
7. Kul Tepe VIII (Dalma painted ware); Loc. 3027: everted rim fragment of jar with short neck; fine textured; HM; red 2.5 YR 5/8; washed on the exterior and interior; mixed inclusions; under-fired.
8. Kul Tepe VIII (Dalma painted ware); Loc. 3027: rim fragment of a holmouth open bowl; medium textured; HM; light red 2.5 YR 6/8; slipped on the exterior and interior; mixed inclusions; well-fired.
9. Kul Tepe VIII (Dalma painted ware); Loc. 3027: rim fragment of a holmouth open bowl with round body; fine textured; HM; light brown 7.5 YR 5/4; washed on the exterior and interior; mixed inclusions; under-fired.

Fig. 9

1. Kul Tepe VIII (Dalma Period); Loc. 3027: rim fragment of a bowl with grooved and comb design on the shoulder; coarse textured; HM; very pale brown 10 YR 8/3; slipped on the exterior and interior; mixed micaceous inclusions; well-fired.
2. Kul Tepe VIII (Dalma Period); Loc. 3027: small bowl with dense chaff-faced effect on the surface; coarse textured; HM; pale yellow 2.5 Y 8/2; any surface treatment; chaff micaceous inclusions; under-fired.
3. Kul Tepe VIII (Dalma painted ware); Loc. 3027: painted body fragment of a bowl; fine textured; HM; reddish yellow 5 YR 6/8; washed on the exterior and interior; mixed inclusions; under-fired.

4. Kul Tepe VIII (Dalma painted ware); Loc. 3027: painted body fragment of a bowl; fine textured; HM; reddish yellow 5 YR 6/8; washed on the exterior and interior; mixed inclusions; under-fired.
5. Kul Tepe VIII (Dalma Period); Loc. 3027: flat base fragment of a jar; coarse textured; HM; very pale brown 2.5 Y 8/2; slipped on the exterior and interior; mixed micaceous inclusions; well-fired.
6. Kul Tepe VIII (Dalma Period); Loc. 3027: flat base fragment of a jar with vertical body; coarse textured; HM; light reddish brown 2.5 YR 7/3; slipped on the exterior and interior; mixed micaceous inclusions; under-fired.
7. Kul Tepe VIII (Dalma painted ware); Loc. 3027: painted body fragment of a bowl; fine textured; HM; red 10 R 4/8; washed on the exterior and interior; mixed inclusions; under-fired.
8. Kul Tepe VIII (Dalma painted ware); Loc. 3027: painted body fragment of a bowl; fine textured; HM; light brown 7.5 YR 5/4; washed on the exterior and interior; mixed inclusions; under-fired.
9. Kul Tepe VIII (Dalma Period); Loc. 3026: large open shallow bowl; Kul Tepe VIII; coarse textured; HM; light gray 7.5 YR 7/1; wet smoothed treatment on the exterior and slipped on the interior; mixed micaceous inclusions; under -fired.
10. Kul Tepe VIII (Dalma Period); Loc. 3026: rim fragment of a bowl with comb design; coarse textured; HM; light gray 7.5 YR 7/1; slipped on the exterior and interior; mixed inclusions; well-fired.

**Fig. 10**

1. Kul Tepe VIII (Dalma painted ware); Loc. 3026: rim fragment of a holmouth open bowl with round body; fine textured; HM; red 2.5 YR 5/8; washed on the exterior and interior; mixed inclusions; under-fired.
2. Kul Tepe VIII (Dalma painted ware); Loc. 3026: rim fragment of a jarlet; fine textured; HM; red 10 R 4/8; washed on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VIII (Dalma painted ware); Loc. 3026: painted body fragment of a bowl; medium textured; HM; light red 10 R 7/6; slipped on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VIII (Dalma painted ware); Loc. 3026: painted body fragment of a bowl; fine textured; HM; reddish brown 2.5 YR 4/4; washed on the exterior and interior; mixed inclusions; under-fired.
5. Kul Tepe VIII (Dalma painted ware); Loc. 3026: painted body fragment of a bowl; fine textured; HM; red 2.5 YR 4/8; washed on the exterior and interior; mixed inclusions; well-fired.
6. Kul Tepe VIII (Dalma painted ware); Loc. 3026: painted body fragment of a bowl; fine textured; HM; red 2.5 YR 4/8; washed on the exterior and interior; mixed inclusions; well-fired.
7. Kul Tepe VIII (Dalma painted ware); Loc. 3026: everted rim fragment of jar; fine textured; HM; reddish brown 5 YR 4/4; washed on the exterior and interior; mixed inclusions; well-fired.

8. Kul Tepe VIII (Dalma painted ware); Loc. 3025: everted rim fragment of jar with short neck and rounded body; fine textured; HM; reddish yellow 5 YR 7/8; washed on the exterior and interior; mixed inclusions; well-fired.
9. Kul Tepe VIII (Dalma Period); Loc. 3025: rim fragment of jar; medium textured; HM; reddish yellow 5 YR 7/8; washed on the exterior and interior; mixed inclusions; under-fired.
10. Kul Tepe VIII (Dalma Period); Loc. 3025: rim fragment of a bowl with chaff effect on the surface; medium textured; HM; light red 2.5 YR 6/6; washed on the exterior and interior; mixed inclusions; under-fired.
11. Kul Tepe VIII (Dalma Period); Loc. 3025: rim fragment of a bowl; medium textured; HM; reddish gray 2.5 YR 5/1; washed on the exterior and burnished on the interior; mixed inclusions; under-fired.
12. Kul Tepe VIII (Dalma Period); Loc. 3025: flat base fragment of a bowl; coarse textured; HM; light gray 7.5 YR 7/1; slipped on the exterior and interior; mixed inclusions; under-fired.

### Kul Tepe VII (LCI= Pisdeli)

Fig. 12

1. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: typical Pisdeli type jar with everted flaring rim; fine textured; HM; very pale brown 10 YR 7/3; washed on the exterior and interior; fine grit inclusions; well-fired.
2. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: typical Pisdeli type rim fragment of a jar; fine textured; HM; pale yellow 2.5 Y 8/2; washed on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: rim fragment of a jar with short neck; medium textured; HM; pink 7.5 YR 8/3; washed on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: rim fragment of a holemouth bowl with chaff effect on the surface; medium textured; HM; gray 10 YR 6/1; slipped on the exterior and interior; chaff micaceous inclusions; under-fired.
5. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: rim fragment of a holemouth bowl with dense chaff effect on the surface; medium textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; mixed micaceous inclusions; under-fired.
6. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: rim fragment of a jar with dense chaff effect on the surface; fine textured; HM; gray 10 YR 6/1; slipped on the exterior and interior; mixed inclusions; well-fired.
7. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: one handle jar with large handle extending from rim to shoulder and dense chaff effect on the surface; medium textured; HM; pink 5 YR 8/4; slipped on the exterior and interior; chaff micaceous inclusions; under-fired.
8. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: typical shallow tray with high chaff effect on the surface; medium textured; HM; light reddish brown 5 YR 6/4; washed on the exterior and interior; mixed micaceous inclusions; under-fired.
9. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: body fragment of a jar with relief decoration; coarse textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; chaff inclusions; under-fired.

10. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: body fragment of a jar with relief decoration; coarse textured; HM; pale yellow 2.5 Y 8/3; washed on the exterior and interior; chaff inclusions; under-fired.
11. Kul Tepe VII (LCI= Pisdeli); Loc. 3023: flat base fragment of a jar; coarse textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.

**Fig. 13**

1. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: rim fragment of a bowl with knob decoration under the rim; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
2. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: rim fragment of bowl with knob decoration under the rim and chaff effect on the surface; fine textured; HM; gray 10 YR 6/1; washed on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: rim fragment of a jar with knob decoration under the rim; HM; pink 7.5 YR 7/4; any treatment; mixed inclusions; well-fired.
4. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: rim fragment of a bowl with knob decoration under the rim and chaff effect on the surface; fine textured; HM; gray 10 YR 6/1; slipped on the exterior and interior; chaff inclusions; well-fired.
5. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: incised body fragment; medium textured; HM; very pale brown 10 YR 7/3; slipped on the exterior and interior; mixed inclusions; under-fired.
6. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: perforated and comb designed body fragment of a jar; medium textured; HM; brown 7.5 YR 4/3; any surface treatment; mixed inclusions; under-fired.
7. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: typical shallow tray with dense chaff effect on the surface; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed micaceous inclusions; under-fired.
8. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: typical shallow tray; coarse textured; HM; pink 7.5 YR 7/4; any surface treatment; mixed micaceous inclusions; under-fired.
9. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: base fragment of a jar; coarse textured; HM; reddish yellow 5 YR 7/6; any surface treatment; chaff inclusions; under-fired.
10. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: comb design vertical base fragment of a jar; medium textured; HM; pinkish gray 5 YR 6/2; any surface treatment; mixed inclusions; well-fired.

**Fig. 14**

1. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: large wide-collared everted rim fragment of a jar with annular coil decoration around the shoulder; coarse textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; mixed inclusions; under-fired.
2. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: rim fragment of a jar with grooved decoration under the rim; medium textured; HM; reddish yellow 5 YR 7/8; slipped on the exterior and interior; mixed inclusions; under-fired.

3. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: painted rim fragment of a small bowl; fine textured; HM; reddish yellow 5 YR 7/8; slipped on the exterior and interior; mixed inclusions; under-fired.
4. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: incised grooved and comb design body fragment of a jar; medium textured; HM; blackened; slipped on the exterior and interior; grit inclusions; well-fired.
5. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: one handle jar with fine typical handle and dense chaff effect on the surface; fine textured; HM; pink 2.5 YR 8/3; slipped on the exterior and interior; chaff inclusions; under-fired.
6. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: one handle jar fragment with everted rim and chaff effect on the surface; fine textured; HM; light gray 5 YR 7/1; slipped on the exterior and interior; mixed inclusions; well-fired.
7. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: painted body fragment of a small jar; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; mixed inclusions; well-fired.
8. Kul Tepe VII (LCI= Pisdeli); Loc. 3022: handle fragment of a jar with chaff effect on the surface; medium textured; HM; pink 7.5 YR 8/3; slipped on the exterior and interior; chaff micaceous inclusions; well-fired.

**Fig. 15**

1. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: incised grooved and comb design rim fragment of a holemouth jar with rounded body; medium textured; HM; pink 5 YR 7/6; any surface treatment; grit inclusions; well-fired.
2. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: everted rim fragment of a jar with dense chaff-faced effect on the surface; medium textured; HM; pink 7.5 YR 8/3; slipped on the exterior and interior; chaff inclusions; well-fired.
3. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: rim fragment of a jar with rounded body and knob decoration under the rim; fine textured; HM; light gray 10 YR 7/2; slipped on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: incised grooved and comb design rim fragment of a jar; coarse textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
5. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: body fragment of a jar with annular coil decoration around the shoulder, coarse textured; HM; pink 7.5 YR 7/3; slipped on the exterior and interior; mixed inclusions; under-fired.
6. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: body fragment of a jar with annular coil decoration around the shoulder; medium textured; HM; red 10 R 4/6; washed on the exterior and interior; mixed inclusions; well-fired.
7. Kul Tepe VII (LCI= Pisdeli); Loc. 3021: base fragment of a jar; medium textured; HM; reddish yellow 5 YR 6/6; slipped on the exterior and interior; mixed micaceous inclusions; under-fired.

8. Kul Tepe VII (LC1= Pisdeli); Loc. 3021: base fragment of a jar; coarse textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
9. Kul Tepe VII (LC1= Pisdeli); Loc. 3021: base fragment of a jar; coarse textured; HM; pink 7.5 YR 8/3; slipped on the exterior and interior; mixed inclusions; under-fired.

#### Kul Tepe VIB (LC2= Chaff-faced Ware)

Fig. 17

1. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a bowl with chaff-faced effect on the surface; medium textured; HM; light reddish brown 2.5 YR 7/4; washed on the exterior and interior; mixed inclusions; well-fired.
2. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a holmouth bowl with dense chaff-faced effect on the surface and rounded body; medium textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; mixed micaceous inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a holmouth bowl with grooved and comb design; medium textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a jar; medium textured; HM; reddish yellow 5 YR 6/6; slipped on the exterior and interior; mixed inclusions; under-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a shouldered bowl; fine textured; HM; light gray 5 YR 7/1; slipped on the exterior and interior; mixed inclusions; well-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: perforated and comb designed everted rim fragment of a jar; medium textured; HM; reddish yellow 5 YR 6/6; any surface treatment; chaff inclusions; under-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: perforated and comb designed rim fragment of a bowl (manqal?); coarse textured; HM; light brown 7.5 YR 6/3; slipped on the exterior and interior; chaff inclusions; well-fired.
8. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: rim fragment of a bowl with grooved and comb design; fine textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; chaff inclusions; under-fired.
9. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: everted rim fragment of a jar with short neck; fine textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; well-fired.
10. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3020: base fragment from a jar; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; chaff inclusions; under-fired.

Fig. 18

1. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: everted rim fragment of a jar with short neck; medium textured; HM; dark gray 7.5 YR 4/1; burnished on the exterior and washed on the interior; mixed micaceous inclusions; well-fired.



2. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: rim fragment of a collared jar; medium textured; HM; pink 7.5 YR 7/3; slipped on the exterior and interior; chaff inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: body fragment of a jar with excised snake-like motif; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; mixed inclusions; under-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: incised grooved and comb design body fragment of a jar; coarse textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; chaff inclusions; under-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: chaff-faced rim fragment of a collared jar; medium textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; mixed micaceous inclusions; well-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: chaff-faced rim fragment of a jar with grooved decoration under the rim; fine textured; HM; pink 7.5 YR 7/4; slipped on the exterior and interior; chaff inclusions; under-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: body fragment of a jar with knob decoration; coarse textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; chaff inclusions; under-fired.
8. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3018: base fragment from a jar with dense chaff-faced effect on the surface; medium textured; HM; pink 5 YR 7/3; slipped on the exterior and interior; chaff inclusions; under-fired.

**Fig. 19**

1. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3007: everted rim fragment of a carinated bowl with chaff-faced effect on the surface; medium textured; HM; gray 7.5 YR 6/1; slipped on the exterior and interior; mixed inclusions; well-fired.
2. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3007: fine rim fragment of a bowl with chaff-faced effect on the surface; fine textured; HM; gray 7.5 YR 6/1; slipped on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3007: handle fragment of a jar; coarse textured; HM; pink 5 YR 8/4; washed on the exterior and interior; mixed inclusions; under-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3007: base fragment from a jar with dense chaff-faced effect on the surface; medium textured; HM; white 5 YR 8/1; washed on the exterior and interior; mixed micaceous inclusions; well-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3007: comb design vertical base fragment of a jar; medium textured; HM; white 5 YR 8/1; any surface treatment; grit inclusions; under-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: body fragment of a jar with knob decoration; medium textured; HM; light red 2.5 YR 6/8; slipped on the exterior and interior; mixed inclusions; under-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: rim fragment of a short necked jar; medium textured; HM; gray 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.

8. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: everted rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pinkish white 7.5 YR 8/2; slipped on the exterior and interior; mixed micaceous inclusions; under-fired.
9. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: rim fragment of a jar; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
10. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: everted rim fragment of a jar with chaff-faced effect on the surface; fine textured; HM; pinkish white 5 YR 8/2; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
11. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: fine rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
12. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3016: body fragment of a jar with chaff-faced effect and knob decoration; coarse textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; mixed inclusions; under-fired.

**Fig. 20**

1. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: fine everted rim fragment of a short necked jar with chaff-faced effect on the surface and knob decoration under the rim; medium textured; HM; pink 5 YR 8/4; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
2. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: everted rim fragment of a jar with dense chaff-faced effect on the surface; medium textured; HM; pink 7.5 YR 8/4; washed on the exterior and interior; mixed inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: everted rim fragment of a jar with short neck and chaff-faced effect on the surface; medium textured; HM; very pale brown 10 YR 7/4; slipped on the exterior and interior; mixed inclusions; under-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: everted rim fragment of a jar with short neck and chaff-faced effect on the surface; medium textured; HM; blackened; slipped on the exterior and interior; mixed inclusions; well-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: fine rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; mixed inclusions; under-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: rim fragment of a bowl with grooved decoration under the rim; built by coil technique; medium textured; HM; pink 5 YR 7/4; washed on the exterior and interior; mixed micaceous inclusions; under-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3015: body fragment of a jar with chaff-faced effect and double knob decoration; built by coil technique; medium textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; mixed inclusions; well-fired.
8. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; reddish yellow 5 YR 7/6; wet-smoothed and slipped on the exterior and interior; mixed inclusions; under-fired.

9. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: rim fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; reddish yellow 5 YR 7/6; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
10. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: grooved and comb design fine rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; pinkish gray 5 YR 7/2; slipped on the exterior and interior; mixed inclusions; under-fired.
11. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; pinkish gray 5 YR 7/2; washed on the exterior and interior; mixed inclusions; well-fired.
12. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: fine rim fragment of a bowl with chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/3; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
13. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: grooved rim fragment of a small jar with everted short neck; fine textured; HM; gray 5 YR 6/1; burnished on the exterior and interior; mixed micaceous inclusions; well-fired.
14. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3014: perforated and comb designed body fragment of a jar; medium textured; HM; blackened; any surface treatment; mixed inclusions; under-fired.

**Fig. 21**

1. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3013: rim fragment of a bowl with incised decoration on the interior; coarse textured; HM; reddish yellow 5 YR 6/6; any surface treatment; mixed inclusions; well-fired.
2. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3013: rim fragment of a bowl with incised decoration on the interior; coarse textured; HM; reddish yellow 5 YR 6/6; any surface treatment; mixed inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3013: body fragment of a bowl with incised decoration on the interior; coarse textured; HM; reddish yellow 5 YR 6/6; any surface treatment; mixed inclusions; well-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3010: fine rim fragment of a beaker with chaff-faced effect on the surface; fine textured; HM; gray 7.5 YR 6/1; burnished on the exterior and interior; chaff inclusions; well-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3010: high collar rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 7/3; washed on the exterior and interior; mixed inclusions; under-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3010: rim fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; pink 5 YR 7/3; washed on the exterior and interior; mixed inclusions; under-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3010: everted rim fragment of a jar; coarse textured; HM; pink 7.5 YR 6/4; any surface treatment; mixed inclusions; under-fired.
8. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3010: rim fragment of a beaker with high chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/3; slipped on the exterior and interior; mixed inclusions; well-fired.

9. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: rim fragment of a jar with perforated designed; medium textured; HM; reddish gray 5 YR 5/2; any surface treatment; grit inclusions; under-fired.
10. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: jar with rail rim and chaff-faced effect on the surface; fine textured; HM; reddish gray 5 YR 5/2; burnished on the exterior and interior; mixed inclusions; well-fired.
11. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: rim fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; reddish gray 5 YR 5/2; slipped on the exterior and interior; chaff micaceous inclusions; well-fired.
12. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: fine rim fragment of a bowl with grooved and chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/4; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
13. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: fine rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/3; wet-smoothed and slipped on the exterior and interior; mixed inclusions; well-fired.
14. Kul Tepe VIB (LC2= Chaff-faced Ware); Loc. 3008: rim fragment of a jar with grooved and comb design and chaff-faced effect on the surface; mat impression on the interior; fine textured; HM; light reddish brown 5 YR 6/4; burnished on the exterior and interior; mixed inclusions; well-fired.

**Fig. 22**

1. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: rim fragment of a bowl; medium textured; HM; pinkish gray 5 YR 6/2; burnished on the exterior and interior; mixed inclusions; well-fired.
2. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: everted rim fragment of a carinated bowl with chaff-faced effect on the surface; fine textured; HM; reddish yellow 5 YR 6/6; burnished on the exterior and interior; chaff inclusions; well-fired.
3. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: everted flaring necked rim fragment of a jar; fine textured; HM; black 5 YR 2.5/1; burnished on the exterior and interior; mixed inclusions; well-fired.
4. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: everted necked rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 8/3; washed on the exterior and interior; mixed inclusions; well-fired.
5. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: fine rim fragment of a bowl with grooved and chaff-faced effect on the surface; fine textured; HM; light brown 5 YR 6/3; slipped on the exterior and interior; mixed inclusions; well-fired.
6. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: comb design vertical base fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; light brown 5 YR 6/3; any surface treatment; mixed micaceous inclusions; well-fired.
7. Kul Tepe VIB (LC2= Chaff-faced Ware); F. 3002: fine rim fragment of a jar with short neck; fine textured; HM; gray 7.5 YR 5/1; burnished on the exterior and interior; mixed inclusions; well-fired.

8. Kul Tepe VIB (LC<sub>2</sub>= Chaff-faced Ware); F. 3002: perforated designed body fragment of a jar; fine textured; HM; gray 7.5 YR 5/1; any surface treatment; mixed inclusions; well-fired.
9. Kul Tepe VIB (LC<sub>2</sub>= Chaff-faced Ware); F. 3002: grooved designed body fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusions; well-fired.
10. Kul Tepe VIB (LC<sub>2</sub>= Chaff-faced Ware); F. 3002: base fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; mixed inclusions; under-fired.
11. Kul Tepe VIB (LC<sub>2</sub>= Chaff-faced Ware); F. 3002: comb design vertical base fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; blackened; any surface treatment; mixed inclusions; under-fired.

### Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware)

Fig. 25

1. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 3001: incised grooved and comb design rim fragment of a bowl; medium textured; HM; light reddish brown 5 YR 6/3; slipped on the exterior and interior; mixed inclusion; well-fired.
2. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 3001: rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 8/3; washed on the exterior and interior; mixed micaceous inclusion; well-fired.
3. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 3001: rim fragment of a bowl; medium textured; HM; red 2.5 YR 5/6; washed on the exterior and interior; mixed micaceous inclusion; well-fired.
4. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 3001: rim fragment of a bowl; fine textured; HM; gray 5 YR 5/1; burnished on the exterior and interior; mixed inclusion; well-fired.
5. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 3001: high collard rim fragment of a jar with dense chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/3; burnished on the exterior and interior; mixed micaceous inclusion; under-fired.
6. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3007: large high collard rim fragment of a jar; medium textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed micaceous inclusion; well-fired.
7. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3007: rim fragment of a jar with everted short neck and dense chaff-faced effect on the surface; fine textured; HM; gray 5 YR 5/1; burnished on the exterior and interior; mixed inclusion; well-fired.
8. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3007: rail rim fragment of a jar; fine textured; HM; light gray 7.5 YR 7/1; slipped on the exterior and interior; mixed inclusion; well-fired.
9. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3007: perforated rim fragment of a jar; medium textured; HM; light brown 7.5 YR 6/3; any surface treatment; mixed inclusion; well-fired.

10. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3007: body fragment of a jar with dense chaff-faced effect on the surface; fine textured; HM; red 10 YR 4/8; washed on the exterior and interior; mixed inclusion; well-fired.
11. Kul Tepe VIB (LC<sub>2</sub>= Chaff-faced Ware); Loc. 3007: gritty vertical base fragment from a jar; coarse textured; HM; blackened; any surface treatment; grit micaceous inclusions; under-fired.

**Fig. 26**

1. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3006: everted rim fragment of a jar; fine textured; HM; gray 7.5 YR 5/1; burnished on the exterior and interior; mixed inclusion; well-fired.
2. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3006: very short everted rim fragment of a jar; medium textured; HM; red 2.5 YR 5/8; washed on the exterior and interior; mixed inclusion; well-fired.
3. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3006: grooved and comb design perforated body fragment of a jar; medium textured; HM; blackened; any surface treatment; mixed inclusion; under-fired.
4. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3006: gritty vertical base fragment of a jar with dense chaff-faced effect on the surface; medium textured; HM; blackened; any surface treatment; grit micaceous inclusions; under-fired.
5. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: gritty vertical base fragment of a jar; medium textured; HM; blackened; any surface treatment; grit micaceous inclusions; well-fired.
6. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: rail rim fragment of a bowl; fine textured; HM; gray 7.5 YR 5/1; burnished on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: double perforated comb design everted rim fragment of a jar; coarse textured; HM; blackened (with base color of reddish yellow 5 YR 7/6); any surface treatment; mixed inclusion; under-fired.
8. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: rail rim fragment of a jar; fine textured; HM; pinkish gray 5 YR 7/2; burnished on the exterior and interior; mixed inclusion; under-fired.
9. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: rim fragment of a bowl; medium textured; HM; light brownish gray 10 YR 6/2; slipped on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: everted rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; reddish yellow 5 YR 6/6; washed on the exterior and interior; grit inclusion; well-fired.

**Fig. 27**

1. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3004: vertical rim and rounded, simple lip fragment of a jar; fine textured; HM; gray 7.5 YR 5/1; burnished on the exterior and interior; mixed inclusion; well-fired.



2. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3004: vertical rim and rounded, simple lip fragment of a jar; fine textured; HM; gray 7.5 YR 5/1; burnished on the exterior and interior; mixed inclusion; well-fired.
3. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3004: vertical rim and rounded, simple lip fragment of a jar; medium textured; HM; light red 2.5 YR 6/6; washed on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3005: rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pinkish white 5 YR 8/2; any surface treatment; mixed micaceous inclusion; well-fired.
5. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3004: short vertical rim fragment of a holemouth jar with knob decoration on the shoulder; medium textured; HM; gray 7.5 YR 6/1; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3004: carinated shoulder body fragment of a jar; medium textured; HM; gray 7.5 YR 6/1; washed on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3002: vertical rim and rounded, simple lip fragment of a jar; medium textured; HM; Red-Black Burnished Ware (black exterior and red interior); burnished on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 3002: incised carinated shoulder body fragment of a jar; fine textured; HM; light brown 7.5 YR 6/4; burnished on the exterior and interior; grit inclusion; well-fired.

Fig. 28

1. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2055: everted rim fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; mixed micaceous inclusion; well-fired.
2. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2055: rim fragment of a bowl with chaff-faced effect on the surface; fine textured; HM; pinkish gray 5 YR 7/2; slipped on the exterior and interior; mixed inclusion; well-fired.
3. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2055: comb design body fragment of a jar with chaff-faced effect on the surface; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; mixed micaceous inclusion; well-fired.
4. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2053: everted rim fragment of a jar with chaff-faced effect on the surface; coarse textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; mixed micaceous inclusion; well-fired.
5. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2053: everted rim fragment of a jar; coarse textured; HM; reddish yellow 5 YR 6/6; slipped on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2053: geometric painted miniature rim fragment of a bowl; fine textured; HM; pink 5 YR 8/4; washed on the exterior and interior; chaff inclusion; well-fired.

7. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2053: rim fragment of a bowl with rounded body and chaff-faced effect on the surface; fine textured; HM; pinkish gray 5 YR 6/2; slipped on the exterior and interior; chaff inclusion; well-fired.
8. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: high collared rim fragment of a jar; coarse textured; HM; very pale brown 10 YR 8/4; slipped on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: rim fragment of a bowl with chaff-faced effect on the surface; fine textured; HM; pink 5 YR 7/4; slipped on the exterior and interior; mixed inclusion; well-fired.
10. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: comb design body fragment of a jar; medium textured; HM; very pale brown 10 YR 8/4; any surface treatment; mixed inclusion; well-fired.
11. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: rim fragment of a large jar with short neck and rounded body; medium textured; HM; light reddish brown 5 YR 6/4; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
12. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: rim fragment of a large jar with short neck and rounded body; medium textured; HM; light reddish brown 5 YR 6/4; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
13. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: rim fragment of a bowl with chaff-faced effect on the surface; medium textured; HM; pink 7.5 YR 8/3; slipped on the exterior and interior; mixed micaceous inclusion; well-fired.
14. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: rim fragment of a bowl with dense chaff-faced effect on the surface; medium textured; HM; pink 5 YR 3/3; slipped on the exterior and interior; mixed inclusion; well-fired.
15. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: rim fragment of a bowl with dense chaff-faced effect on the surface; coarse textured; HM; blackened; any surface treatment; grit inclusion; well-fired.
16. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: small double perforated everted fragment of a jar; medium textured; HM; light brownish gray 10 YR 6/2; slipped on the exterior and interior; grit inclusion; well-fired.
17. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: handle of a large jar were applied vertically to the wall of the vessel; coarse textured; HM; pink 5 YR 8/4; slipped on the exterior and interior; grit inclusion; well-fired.
18. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); Loc. 2054: base fragment of a jar; coarse textured; HM; reddish yellow 5 YR 7/6; any surface treatment; grit inclusion; well-fired.
19. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: base fragment of a jar; medium textured; HM; pink 7.5 YR 8/4; slipped on the exterior and interior; mixed inclusion; well-fired.

**Fig. 29**

1. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: floor of F. 2049 with huge material of chaff-faced ware horizon of LC<sub>3</sub>.

2. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: rail rim tray like pottery; medium textured; HM; light brown 5 YR 6/3; slipped on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: very typical chaff-faced large footed pedestal fruit bowl; medium textured; HM; light brown 7.5 YR 8/3; washed on the exterior and interior; chaff inclusion; well-fired.
4. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: jar with short neck and chaff-faced effect on the surface; medium textured; HM; blackened; any surface treatment; mixed inclusion; well-fired.
5. Kul Tepe VIA (LC<sub>3</sub>= Chaff-faced/Chaff-tempered Ware); F. 2049: everted rim jar with short neck and chaff-faced effect on the surface; medium textured; HM; pinkish white 5 YR 8/2; slipped on the exterior and interior; mixed inclusion; well-fired.

### Kul Tepe V (Kura-Araxes I)

#### Fig. 32

1. Kul Tepe V (Kura-Araxes I); Loc. 2046: everted rim fragment of a jar; medium textured; HM; Grey 5 YR 5/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
2. Kul Tepe V (Kura-Araxes I); Loc. 2046: unknown shape; coarse textured; HM; pinkish Grey 5 YR 6/2; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
3. Kul Tepe V (Kura-Araxes I); Loc. 2046: typical **Black-Burnished Nakhichevan-Lug**; fine textured; HM; **Black-Burnished**; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe V (Kura-Araxes I); Loc. 2044: everted rim fragment of a bowl; medium textured; HM; dark Grey 5 YR 4/1; slipped on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe V (Kura-Araxes I); Loc. 2044: incised abstract zoomorphic body fragment with white paste; medium textured; HM; Grey 7.5 YR 5/1; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe V (Kura-Araxes I); Loc. 2044: concave base of a jar; medium textured; HM; Grey 7.5 YR 5/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
7. Kul Tepe V (Kura-Araxes I); Loc. 2045: **Black-Burnished** everted rim fragment of a jar; fine textured; HM; **Black-Burnished**; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
8. Kul Tepe V (Kura-Araxes I); Loc. 2045: **Black-Burnished** everted rim fragment of a jar; medium textured; HM; **Black-Burnished**; burnished on the exterior and interior; grit micaceous inclusion; well-fired.

#### Fig. 33

1. Kul Tepe V (Kura-Araxes I); Loc. 2043: **Black-Burnished** everted rim fragment of a jar; medium textured; HM; **Black-Burnished**; burnished on the exterior and interior; grit inclusion; well-fired.

2. Kul Tepe V (Kura-Araxes I); Loc. 2043: everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; Grey 5 YR 5/1; washed on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe V (Kura-Araxes I); Loc. 2043: typical **Grey-Burnished Nakhichevan-Lug**; medium textured; HM; Grey 7.5 YR 6/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
4. Kul Tepe V (Kura-Araxes I); Loc. 2043: flat base of a jar; medium textured; HM; brown 7.5 YR 5/2; burnished on the exterior and interior; grit micaceous micaceous inclusion; well-fired.
5. Kul Tepe V (Kura-Araxes I); F. 2038: **Kura-Araxes Brown Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; light brown 7.5 YR 6/4; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe V (Kura-Araxes I); F. 2038: **Kura-Araxes Brown Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; light brown 7.5 YR 6/4; burnished on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe V (Kura-Araxes I); F. 2038: **Kura-Araxes Brown Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body and Nakhichevan-Lug between the neck and shoulder; medium textured; HM; light reddish brown 5 YR 6/3; burnished on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe V (Kura-Araxes I); F. 2038: **Kura-Araxes Brown Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; fine textured; HM; reddish Grey 5 YR 5/2; burnished on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe V (Kura-Araxes I); F. 2038: typical **Brown -Burnished Nakhichevan-Lug**; medium textured; HM; reddish brown 5 YR 5/4; burnished on the exterior and interior; grit inclusion; well-fired.

Fig. 34

1. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): **Kura-Araxes Brown Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; brown 7.5 YR 5/2; burnished on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): neck fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; grit inclusion; well-fired.

4. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): typical **Nakhichevan-Lug**; medium textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; coarse textured; HM; Grey 5 YR 6/1; washed on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): rim fragment of a bowl with incised decoration around the shoulder; medium textured; HM; Grey 5 YR 5/1; burnished on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): neck fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; coarse textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): typical **Nakhichevan-Lug**; medium textured; WM (low-wheel); pinkish Grey 5 YR 7/2; washed on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe V (Kura-Araxes I); F. 2036 (pottery inside the kiln): typical **Nakhichevan-Lug**; medium textured; HM; reddish yellow 5 YR 7/6; washed on the exterior and interior; grit inclusion; well-fired.

#### Kul Tepe IV (Kura-Araxes II)

##### Fig. 41

1. Kul Tepe IV (Kura-Araxes II); Loc. 2033: **Kura-Araxes Black-Burnished**; Triple-handled (Nakhichevan-Lug) jar with handle placed between neck and shoulder or mid-shoulder; coarse textured; HM; Grey 5 YR 5/1; burnished on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe IV (Kura-Araxes II); Loc. 2041: typical **Kura-Araxes Grey-Burnished**, lid with a central depression and Nakhichevan-Lug; medium textured; HM; Grey 7.5 YR 6/1; burnished on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Black-Burnished Ware**; single grip handled bowl with two snake-like relief decoration around the shoulder; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe IV (Kura-Araxes II); Loc. 2029: four-legged fruit bowl with one Nakhichevan-Lug around the shoulder; medium textured; HM; very pale brown 10 YR 7/4; burnished on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe IV (Kura-Araxes II); surface survey sample; body fragment of a jar with white paste incised abstract geometric design; medium textured; HM; reddish yellow 7.5 YR 7/6; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe IV (Kura-Araxes II); Loc. 1045: **Kura-Araxes Black-Burnished Ware**; single grip handled bowl with relief decoration around the shoulder; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.

7. Kul Tepe IV (Kura-Araxes II); surface survey sample: **Kura-Araxes Grey-Burnished Ware**; closed shape, small ovoid jarlet with outflaring neck and everted rim and incised zoomorphic design on the shoulder; fine textured; HM; dark Greyish brown 10 YR 4/2; slipped on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe IV (Kura-Araxes II); surface survey sample: **Kura-Araxes Grey-Burnished Ware**; closed shape, small ovoid jarlet with outflaring neck and everted rim and incised ornithomorphic design on the shoulder; medium textured; HM; light olive brown 2.5 Y 5/3; slipped on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe IV (Kura-Araxes II); surface survey sample: **Kura-Araxes Brown-Burnished Ware**; closed shape, small ovoid jarlet with outflaring neck and everted rim and incised design on the rim; medium textured; HM; brown 7.5 Y 5/2; slipped on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe IV (Kura-Araxes II); surface survey sample: **Kura-Araxes Grey-Burnished Ware**; body fragment of a jar with white paste incised and relief abstract geometric design; medium textured; HM; dark Grey 7.5 YR 4/1; burnished on the exterior and interior; grit inclusion; well-fired.

Fig. 42

1. Kul Tepe IV (Kura-Araxes II); Loc. 2041: **Kura-Araxes Grey Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; Grey 7.5 YR 5/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
2. Kul Tepe IV (Kura-Araxes II); Loc. 2041: **Kura-Araxes Grey Burnished Pottery**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; Grey 7.5 YR 6/1 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit micaceous inclusion; under-fired.
3. Kul Tepe IV (Kura-Araxes II); Loc. 2041: typical **Nakhichevan-Lug**; coarse textured; HM; dark Grey 7.5 YR 4/1; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe IV (Kura-Araxes II); Loc. 2041: typical **Nakhichevan-Lug**; medium textured; HM; dark Grey 7.5 YR 4/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
5. Kul Tepe IV (Kura-Araxes II); F. 2032: typical **Kura-Araxes Black-Burnished**, flat lid with a central depression; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe IV (Kura-Araxes II); F. 2032: everted rim fragment of a bowl; fine textured; HM; grey 7.5 YR 5/1 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe IV (Kura-Araxes II); F. 2032: typical **Nakhichevan-Lug**; medium textured; HM; grey 7.5 YR 5/1; burnished on the exterior and interior; grit inclusion; under-fired.
8. Kul Tepe IV (Kura-Araxes II); F. 2032: typical **Nakhichevan-Lug**; medium textured; HM; reddish yellow 5 YR 6/8; washed on the exterior and interior; grit inclusion; well-fired.



9. Kul Tepe IV (Kura-Araxes II); Loc. 2037: typical **Kura-Araxes Brown-Burnished**, everted rim fragment of a bowl; medium textured; HM; light reddish brown 5 YR 6/3 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit inclusion; under-fired.
10. Kul Tepe IV (Kura-Araxes II); Loc. 2037: typical **Kura-Araxes Grey-Burnished**, everted rim fragment of a bowl; medium textured; HM; light reddish brown 7.5 YR 4/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
11. Kul Tepe IV (Kura-Araxes II); Loc. 2037: **Kura-Araxes Grey Burnished Pottery**, closed rim fragment of a jar with a high neck; medium textured; HM; grey 7.5 YR 6/1 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
12. Kul Tepe IV (Kura-Araxes II); Loc. 2036: wide, one-handed (Nakhichevan-Handle) bowls with rounded body; medium textured; HM; brown 7.5 YR 5/2; burnished on the exterior and interior; grit inclusion; well-fired.
13. Kul Tepe IV (Kura-Araxes II); Loc. 2036: wide, one-handed (Nakhichevan-Handle) bowls with rounded body; coarse textured; HM; brown 7.5 YR 5/2; burnished on the exterior and interior; grit inclusion; well-fired.
14. Kul Tepe IV (Kura-Araxes II); Loc. 2036: everted rim fragment of a bowl with rounded body; fine textured; HM; grey 7.5 YR 5/1 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit inclusion; well-fired.
15. Kul Tepe IV (Kura-Araxes II); Loc. 2036: everted rim fragment of a jar; fine textured; HM; dark grey 7.5 YR 4/1; burnished on the exterior and interior; grit inclusion; well-fired.
16. Kul Tepe IV (Kura-Araxes II); Loc. 2033: typical **Nakhichevan-Lug**; medium textured; HM; pink 5 YR 7/3; burnished on the exterior and interior; grit inclusion; well-fired.
17. Kul Tepe IV (Kura-Araxes II); Loc. 2031: typical **Kura-Araxes Black-Burnished**, everted rim fragment of a bowl with rounded body and handle attached to the middle of the ware; medium textured; HM; black-burnished; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
18. Kul Tepe IV (Kura-Araxes II); Loc. 2031: shallow tray; medium textured; HM; grey 7.5 YR 6/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
19. Kul Tepe IV (Kura-Araxes II); Loc. 2031: typical **Nakhichevan-Lug**; medium textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
20. Kul Tepe IV (Kura-Araxes II); Loc. 2031: typical **Nakhichevan-Lug**; medium textured; HM; light red 2.5 YR 7/8; washed on the exterior and interior; grit inclusion; under-fired.

Fig. 43

1. Kul Tepe IV (Kura-Araxes II); Loc. 1058: large jar with a cylindrical neck and ovoid body, low shoulders and an out flaring neck and Nakhichevan handle between the neck and the shoulder; medium textured; HM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
2. Kul Tepe IV (Kura-Araxes II); Loc. 1058: typical **Kura-Araxes Black-Burnished**, beaker with wide concave neck; medium textured; HM; black burnished; burnished on the exterior and interior; grit inclusion; well-fired.

3. Kul Tepe IV (Kura-Araxes II); Loc. 1058: typical **Kura-Araxes Black-Burnished**, beaker with wide concave neck; fine textured; HM; black burnished; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe IV (Kura-Araxes II); Loc. 1058: typical **Kura-Araxes Black-Burnished**, beaker with wide concave neck; fine textured; HM; black burnished; burnished on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe IV (Kura-Araxes II); Loc. 1058: one-handled cup; medium textured; HM; pinkish white 5 YR 8/2; slipped on the exterior and interior; grit inclusion; under-fired.
6. Kul Tepe IV (Kura-Araxes II); Loc. 1058: wide, one-handled (Nakhichevan-Handle) bowls with rounded body; coarse textured; HM; pinkish white 5 YR 8/2; washed on the exterior and interior; grit micaceous inclusion; under-fired.
7. Kul Tepe IV (Kura-Araxes II); Loc. 1058: typical **Nakhichevan-Lug**; medium textured; HM; pinkish white 5 YR 8/2; washed on the exterior and interior; grit inclusion; under-fired.
8. Kul Tepe IV (Kura-Araxes II); Loc. 1057: **Kura-Araxes Grey Ware**; single grip handled bowl with round body; medium textured; HM; light grey 5 YR 7/1; washed on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe IV (Kura-Araxes II); Loc. 1057: everted rim fragment of a jar with a cylindrical neck and grooved design on the rim and interior of the rim; medium textured; HM; light reddish brown 5 YR 6/3; slipped on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe IV (Kura-Araxes II); Loc. 1057: everted rim fragment of a jar with a cylindrical neck; fine textured; HM; light reddish brown 5 YR 6/3; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
11. Kul Tepe IV (Kura-Araxes II); Loc. 1053: **Kura-Araxes Grey Ware**, single handled pitcher with pear-shaped body and everted rim and handle set on the shoulder; medium textured; HM; grey 7.5 YR 6/1 with dark spots of kiln temperature fluctuation; burnished on the exterior and interior; grit inclusion; well-fired.
12. Kul Tepe IV (Kura-Araxes II); Loc. 1053: typical **Nakhichevan-Lug**; medium textured; HM; pinkish grey 7.5 YR 7/2; slipped on the exterior and interior; grit inclusion; under-fired.
13. Kul Tepe IV (Kura-Araxes II); Loc. 1052: body fragment of a jar with incised abstract geometric design; medium textured; HM; reddish yellow 5 YR 6/8; washed on the exterior and interior; grit inclusion; well-fired.

Fig. 44

1. Kul Tepe IV (Kura-Araxes II); Loc. 1050: bowl with incised cross decoration around the shoulder; medium textured; HM; pinkish grey 5 YR 7/2; any surface treatment; grit inclusion; well-fired.
2. Kul Tepe IV (Kura-Araxes II); Loc. 1050: necked bowl with circular dimple decoration under the rim; medium textured; HM; light reddish brown 5 YR 6/4; washed on the exterior and interior; mixed inclusion; under-fired.
3. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Black-Burnished Ware**, everted round rim fragment of a wide-mouthed beaker; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.

4. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Black-Burnished Ware**, one-handled bowl with everted rim; medium textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Grey-Burnished Ware**, bowl with wide open mouth, deep body and flat base; medium textured; HM; grey 7.5 YR 6/1; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Grey Ware**, bowl with everted rim, wide open mouth, deep body and flat base; medium textured; HM; light grey 10 YR 7/1; slipped on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe IV (Kura-Araxes II); Loc. 1048: **Kura-Araxes Black-Burnished Ware** body fragment of a bowl with circular dimple decoration; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; under-fired.
8. Kul Tepe IV (Kura-Araxes II); Loc. 1045: **Kura-Araxes Black-Burnished Ware**; single grip handled bowl with relief decoration around the shoulder; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe IV (Kura-Araxes II); Loc. 1045: **Kura-Araxes Black-Burnished Ware**; flat base fragment of a bowl; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe IV (Kura-Araxes II); Loc. 1045: **Kura-Araxes Brown-Burnished Ware**, everted round rim fragment of a wide-mouthed beaker; medium textured; HM; brown 5 YR 5/3; burnished on the exterior and interior; grit inclusion; under-fired.
11. Kul Tepe IV (Kura-Araxes II); Loc. 1045: everted rim fragment of a jar with a cylindrical neck; coarse textured; HM; blackened; slipped on the exterior and interior; grit inclusion; under-fired.

Fig. 45

1. Kul Tepe IV (Kura-Araxes II); F. 2020: typical **Kura-Araxes Black-Burnished Ware**, everted rim fragment of a bowl with rounded body and slightly concave base; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe IV (Kura-Araxes II); F. 2020: typical **Kura-Araxes Black-Burnished Ware**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe IV (Kura-Araxes II); F. 2020: typical **Kura-Araxes Grey-Burnished Ware**, everted rim fragment of a jar with a cylindrical neck and grooved design on the interior of the rim; medium textured; HM; grey 7.5 YR 6/1; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe IV (Kura-Araxes II); F. 2020: typical **Kura-Araxes Black-Burnished Ware**, everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; fine textured; HM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe IV (Kura-Araxes II); F. 2029: everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; pinkish grey 5 YR 7/2; washed on the exterior and interior; grit inclusion; under-fired.

6. Kul Tepe IV (Kura-Araxes II); Loc. 2029: typical **Nakhichevan-Lug**; medium textured; HM; reddish yellow 5 YR 6/6; washed on the exterior and interior; grit micaceous inclusion; well-fired.
7. Kul Tepe IV (Kura-Araxes II); Loc. 2028: typical **Kura-Araxes Ware**, single handled pitcher with pear-shaped body and everted rim and handle set on the shoulder; medium textured; HM; pink 5 YR 8/3; washed on the exterior and interior; grit inclusion; under-fired.
8. Kul Tepe IV (Kura-Araxes II); Loc. 2028: **Kura-Araxes Grey Ware**; simple bowl with round and deep body; medium textured; HM; grey 7.5 YR 6/1; burnished on the exterior and interior; grit micaceous inclusion; well-fired.
9. Kul Tepe IV (Kura-Araxes II); Loc. 2028: typical **Nakhichevan-Lug**; medium textured; HM; blackened; slipped on the exterior and interior; grit inclusion; under-fired.
10. Kul Tepe IV (Kura-Araxes II); Loc. 2030: typical **Kura-Araxes Black-Burnished**, beaker with wide concave neck; medium textured; HM; black burnished; burnished on the exterior and interior; grit inclusion; under-fired.
11. Kul Tepe IV (Kura-Araxes II); Loc. 2030: typical **Kura-Araxes Grey-Burnished**, wide-mouthed pot; coarse textured; HM; light grey 5 YR 7/1; burnished on the exterior and interior; grit inclusion; well-fired.
12. Kul Tepe IV (Kura-Araxes II); Loc. 2030: **Kura-Araxes Grey-Burnished Ware**, everted rim fragment of a jar; medium textured; HM; dark grey 7.5 YR 4/1; burnished on the exterior and interior; grit inclusion; well-fired.
13. Kul Tepe IV (Kura-Araxes II); Loc. 2030: **Kura-Araxes Black-Burnished Ware** everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; fine textured; HM; black-burnished; burnished on the exterior and interior; mixed inclusion; well-fired.

### Kul Tepe III (Middle Bronze Age)

Fig. 51

1. Kul Tepe III (Middle Bronze Age); surface survey sample: typical **Polychrome Urmia Ware**, geometric painted (with cross-hatched and butterfly under the rim) polychrome globular bodied pot with raised shoulder and everted rim; fine textured; WM; reddish brown 5 YR 5/4 with black, white and brown paint; washed on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe III (Middle Bronze Age); Loc. 1036: typical **Bichrome Urmia Ware**, Large jar with elongated lower body, raised shoulder, and cylindrical neck decorated with filled cross-hatched diamond around the shoulder; fine textured; WM; pinkish white 5 YR 8/2 with black, white and brown paint; washed on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe III (Middle Bronze Age); Loc. 1036: wide-mouthed beaker with carination on the shoulder; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe III (Middle Bronze Age); Loc. 1036: everted round rim fragment of a wide-mouthed beaker; fine textured; WM; grey 7.5 YR 6/1; burnished on the exterior and interior; grit inclusion; well-fired.

5. Kul Tepe III (Middle Bronze Age); Loc. 1036: everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; WM; black-burnished; burnished on the exterior and interior; mixed inclusion; well-fired.
6. Kul Tepe III (Middle Bronze Age); Loc. 1036: typical **Nakhichevan-Lug** of MBA; medium textured; WM; grey 7.5 YR 5/1; burnished on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe III (Middle Bronze Age); surface survey sample: typical **Polychrome Urmia Ware**, geometric painted (with cross-hatched and butterfly under the rim) polychrome globular bodied pot with raised shoulder and everted rim; fine textured; WM; reddish brown 5 YR 5/4 with black, white and brown paint; washed on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe III (Middle Bronze Age); surface survey sample: typical **Urmia Ware**, geometric painted (with filled cross-hatched diamond and wavy lines around the shoulder) body fragment of a pot; medium textured; HM; pale yellow 2.5 Y 8/2 black on buff paint; slipped on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe III (Middle Bronze Age); Loc. 2010: typical **Urmia Ware**, geometric painted (with horizontal parallel wavy lines around the shoulder) body fragment of a pot; medium textured; WM; red 10 R 4/8 black on red; burnished on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe III (Middle Bronze Age); Loc. 2022: typical **Urmia Ware**, geometric painted (with filled cross-hatched diamond and wavy lines around the shoulder) body fragment of a pot; medium textured; WM; pale yellow 2.5 Y 8/2 black on buff paint; slipped on the exterior and interior; grit inclusion; well-fired.
11. Kul Tepe III (Middle Bronze Age); Loc. 2022: everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; HM; black-burnished; burnished on the exterior and interior; mixed inclusion; well-fired.
12. Kul Tepe III (Middle Bronze Age); Loc. 2022: everted rim fragment of a pot with an ovoid-shaped body; medium textured; HM; reddish grey 5 YR 5/2; burnished on the exterior and interior; mixed inclusion; well-fired.
13. Kul Tepe III (Middle Bronze Age); Loc. 2022: typical **Nakhichevan-Lug** of MBA; medium textured; HM; pinkish grey 5 YR 7/2; slipped on the exterior and interior; grit inclusion; well-fired.

### Kul Tepe II (Iron III/Urartian)

#### Fig. 55

1. Kul Tepe II (Iron III/Urartian); Loc. 1034: wide-mouthed beaker with carination on the shoulder with polished impression; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe II (Iron III/Urartian); Loc. 1034: small round body pot with special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe II (Iron III/Urartian); Loc. 1034: everted short necked bowl with round body and special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.

4. Kul Tepe II (Iron III/Urartian); Loc. 1034: everted rim fragment of a jar; medium textured; WM; pink 5 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe II (Iron III/Urartian); Loc. 1034: everted rim fragment of a jar; fine textured; WM; black-burnished; burnished on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe II (Iron III/Urartian); Loc. 1033: one-handled beaker; medium textured; WM; pinkish grey 5 YR 7/2; slipped on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe II (Iron III/Urartian); Loc. 1033: everted rim fragment of a jar; medium textured; WM; light reddish brown 5 YR 6/3; washed on the exterior and interior; grit inclusion; under-fired.
8. Kul Tepe II (Iron III/Urartian); Loc. 1032: everted rim fragment of a short necked jar; fine textured; WM; pink 5 YR 7/4; burnished on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe II (Iron III/Urartian); Loc. 1032: short collard jar with special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe II (Iron III/Urartian); Loc. 1032: painted body fragment of a jar with special pale red on red painting on the rim and shoulder; fine textured; HM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
11. Kul Tepe II (Iron III/Urartian); Loc. 1032: painted body fragment of a jar with special pale red on red painting on the rim and shoulder; fine textured; HM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
12. Kul Tepe II (Iron III/Urartian); Loc. 1032: painted body fragment of a jar with special pale red on red painting on the rim and shoulder; fine textured; HM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
13. Kul Tepe II (Iron III/Urartian); Loc. 1032: painted body fragment of a carinated shouldered jar with special pale red on red painting on the rim and shoulder; fine textured; HM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.

**Fig. 56**

1. Kul Tepe II (Iron III/Urartian); Loc. 1031: everted rim fragment of a large storage jar; fine textured; WM; pink 2.5 YR 8/3; washed on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe II (Iron III/Urartian); Loc. 1031: grooved everted rim fragment of a storage jar; fine textured; WM; dark grey 7.5 YR 4/1; burnished on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe II (Iron III/Urartian); Loc. 1029: everted rim large storage jar with round body; medium textured; WM; blackened; washed on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe II (Iron III/Urartian); Loc. 1029: bowl with flat base; medium textured; HM; pink 5 YR 7/4; burnished on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe II (Iron III/Urartian); Loc. 1029: one-handled beaker; coarse textured; HM; pale yellow 2.5 Y 8/2; slipped on the exterior and interior; grit inclusion; well-fired.



6. Kul Tepe II (Iron III/Urartian); Loc. 1029: everted rim fragment of a storage jar with incised decoration; medium textured; HM; light reddish brown 5 YR 6/4; washed on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe II (Iron III/Urartian); Loc. 1029: everted rim fragment of a storage jar; medium textured; WM; pinkish grey 5 YR 7/2; burnished on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe II (Iron III/Urartian); Loc. 1029: everted rim large storage jar with round body; medium textured; WM; blackened; burnished on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe II (Iron III/Urartian); Loc. 1029: concave everted rim fragment of a jar; fine textured; WM; red 2.5 YR 5/8; burnished on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe II (Iron III/Urartian); Loc. 1029: everted short necked bowl with round body and special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
11. Kul Tepe II (Iron III/Urartian); Loc. 1029: painted body fragment of a jar with special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
12. Kul Tepe II (Iron III/Urartian); Loc. 1029: painted body fragment of a jar with special pale red on red painting on the rim and shoulder; fine textured; WM; light red 2.5 YR 7/8 with dark red paint; burnished on the exterior and interior; grit inclusion; well-fired.
13. Kul Tepe II (Iron III/Urartian); Loc. 1014: open mouthed bowl with everted rim and narrow base and mat impression on the surface of the ware; medium textured; HM; pink 5 YR 8/3 with dark red paint; slipped on the exterior and interior; grit inclusion; well-fired.
14. Kul Tepe II (Iron III/Urartian); Loc. 1014: everted short necked jar with round body; medium textured; HM; reddish yellow 5 YR 7/6; burnished on the exterior and interior; grit inclusion; well-fired.
15. Kul Tepe II (Iron III/Urartian); Loc. 1014: concaved everted rim fragment of a jar; medium textured; HM; reddish yellow 5 YR 7/6; burnished on the exterior and interior; grit inclusion; well-fired.
16. Kul Tepe II (Iron III/Urartian); Loc. 1014: grooved and concaved everted rim fragment of a bowl; medium textured; HM; pink 5 YR 7/4; burnished on the exterior and interior; grit inclusion; well-fired.

#### Fig. 57

1. Kul Tepe II (Iron III/Urartian); Loc. 1012: beaker with large handle extending from rim to shoulder; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
2. Kul Tepe II (Iron III/Urartian); Loc. 1012: grooved and everted rim bowl; medium textured; HM; pink 5 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe II (Iron III/Urartian); Loc. 1012: carinated bowl with everted rim; medium textured; WM; pink 5 YR 7/3; burnished on the exterior and interior; grit inclusion; well-fired.

4. Kul Tepe II (Iron III/Uartian); Loc. 1012: carinated bowl with everted rim; medium textured; HM; very pale brown 10 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe II (Iron III/Uartian); Loc. 1012: carinated bowl; medium textured; WM; light reddish brown 5 YR 6/4; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
6. Kul Tepe II (Iron III/Uartian); Loc. 1012: body fragment of a vessel with relief decoration; medium textured; WM; pink 5 YR 8/3; washed on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe II (Iron III/Uartian); Loc. 1009: carinated bowl with everted rim; medium textured; HM; pink 5 YR 8/4; slipped on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe II (Iron III/Uartian); Loc. 1009: nosed-handle; medium textured; HM; pinkish grey 5 YR 7/2; slipped on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe II (Iron III/Uartian); Loc. 2010: beaker with large handle extending from rim to shoulder; medium textured; WM; very pale brown 10 YR 8/2; slipped on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe II (Iron III/Uartian); Loc. 2010: hemispherical bowls with slightly thickened rims; fine textured; HM; very pale brown 10 YR 8/2; slipped on the exterior and interior; grit inclusion; well-fired.
11. Kul Tepe II (Iron III/Uartian); Loc. 2010: shallow tray with grooved body; medium textured; HM; pink 5 YR 7/3; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
12. Kul Tepe II (Iron III/Uartian); Loc. 2010: everted short necked jar with round body; medium textured; HM; light reddish brown 5 YR 6/4; washed on the exterior and interior; grit inclusion; well-fired.
13. Kul Tepe II (Iron III/Uartian); Loc. 2010: carinated bowl with everted rim; medium textured; WM; pink 5 YR 8/3; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
14. Kul Tepe II (Iron III/Uartian); Loc. 2010: carinated bowl with everted rim; medium textured; WM; pinkish white 7.5 YR 8/2; slipped on the exterior and interior; grit micaceous inclusion; well-fired.
15. Kul Tepe II (Iron III/Uartian); Loc. 2010: grooved and everted rim bowl; medium textured; WM; reddish brown 5 YR 5/4; slipped on the exterior and interior; grit inclusion; well-fired.
16. Kul Tepe II (Iron III/Uartian); Loc. 2010: everted short necked jar with round body; medium textured; WM; black; washed on the exterior and interior; grit inclusion; well-fired.

#### Kul Tepe I (Achaemenid)

##### Fig. 59

1. Kul Tepe I (Achaemenid); Loc. 1003: carinated bowl with everted rim; medium textured; WM; pinkish white 7.5 YR 8/2; slipped on the exterior and interior; grit inclusion; well-fired.

2. Kul Tepe I (Achaemenid); Loc. 1003: hemispherical bowl with slightly thickened rims; fine textured; WM; pinkish white 5 YR 8/2; slipped on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe I (Achaemenid); Loc. 1003: carinated bowl with everted rim; medium textured; WM; reddish yellow 5 YR 7/6; slipped on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe I (Achaemenid); Loc. 1003: everted rim fragment of a large storage jar with incised decoration on the rim; medium textured; HM; pink 5 YR 8/4; washed on the exterior and interior; grit inclusion; well-fired.
5. Kul Tepe I (Achaemenid); Loc. 1003: everted rim fragment of a jar with a cylindrical neck and high, pronounced shoulders, an ovoid-shaped body; medium textured; WM; light red 2.5 YR 6/8; slipped on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe I (Achaemenid); Loc. 2001: shallow and dimple base fragment of a carinated bowl; fine textured; HM; light reddish brown 2.5 YR 7/4; slipped on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe I (Achaemenid); Loc. 1029: carinated bowl, grading into semi-hemispherical bowls, with straight or slightly everted rims; fine textured; WM; pink 5 YR 8/4; slipped on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe I (Achaemenid); Loc. 2001: rim fragment of a jar, with relief decoration on the rim; coarse textured; HM; pinkish grey 7.5 YR 7/2; washed on the exterior and interior; grit inclusion; well-fired.
9. Kul Tepe I (Achaemenid); Loc. 2001: everted short necked jar with round body; medium textured; WM; blackened; slipped on the exterior and interior; grit inclusion; well-fired.
10. Kul Tepe I (Achaemenid); Loc. 2001: perforated painted body fragment; fine textured; WM; pinkish white 7.5 YR 8/2; vashed on the exterior and interior; grit inclusion; well-fired.
11. Kul Tepe I (Achaemenid); Loc. 2001: miniature jarlet; fine textured; WM; pink 5 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.

**Fig. 60**

1. Kul Tepe I (Achaemenid); Loc. 2002: carinated bowl with everted rim and geometric painting on the interior; fine textured; WM; pink 5 YR 8/3 with red paint; slipped on the exterior and interior; grit inclusion; well-fired.
2. Kul Tepe I (Achaemenid); Loc. 2002: bowl with everted rim and geometric painting on the interior; fine textured; WM; pink 5 YR 8/3 with red paint; slipped on the exterior and interior; grit inclusion; well-fired.
3. Kul Tepe I (Achaemenid); Loc. 2002: carinated bowl, grading into semi-hemispherical bowls, with straight or slightly everted rims; fine textured; WM; pink 5 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.
4. Kul Tepe I (Achaemenid); Loc. 2002: hemispherical holemouth bowl; medium textured; WM; pink 5 YR 8/3; slipped on the exterior and interior; grit inclusion; well-fired.

5. Kul Tepe I (Achaemenid); Loc. 1001: hemispherical holemouth bowl with concave and grooved rim; medium textured; WM; red 2.5 YR 5/8; washed on the exterior and interior; grit inclusion; well-fired.
6. Kul Tepe I (Achaemenid); Loc. 1001: carinated bowl; medium textured; WM; pinkish white 5 YR 8/2; slipped on the exterior and interior; grit inclusion; well-fired.
7. Kul Tepe I (Achaemenid); Loc. 1001: carinated bowl, grading into semi-hemispherical bowls, with straight or slightly everted rims; medium textured; HM; dark red 2.5 YR 3/6; washed on the exterior and interior; grit inclusion; well-fired.
8. Kul Tepe I (Achaemenid); Loc. 1001: carinated bowl, grading into semi-hemispherical bowls, with straight or slightly everted rims; fine textured; HM; light red 2.5 YR 7/8; washed on the exterior and interior; grit inclusion; well-fired.

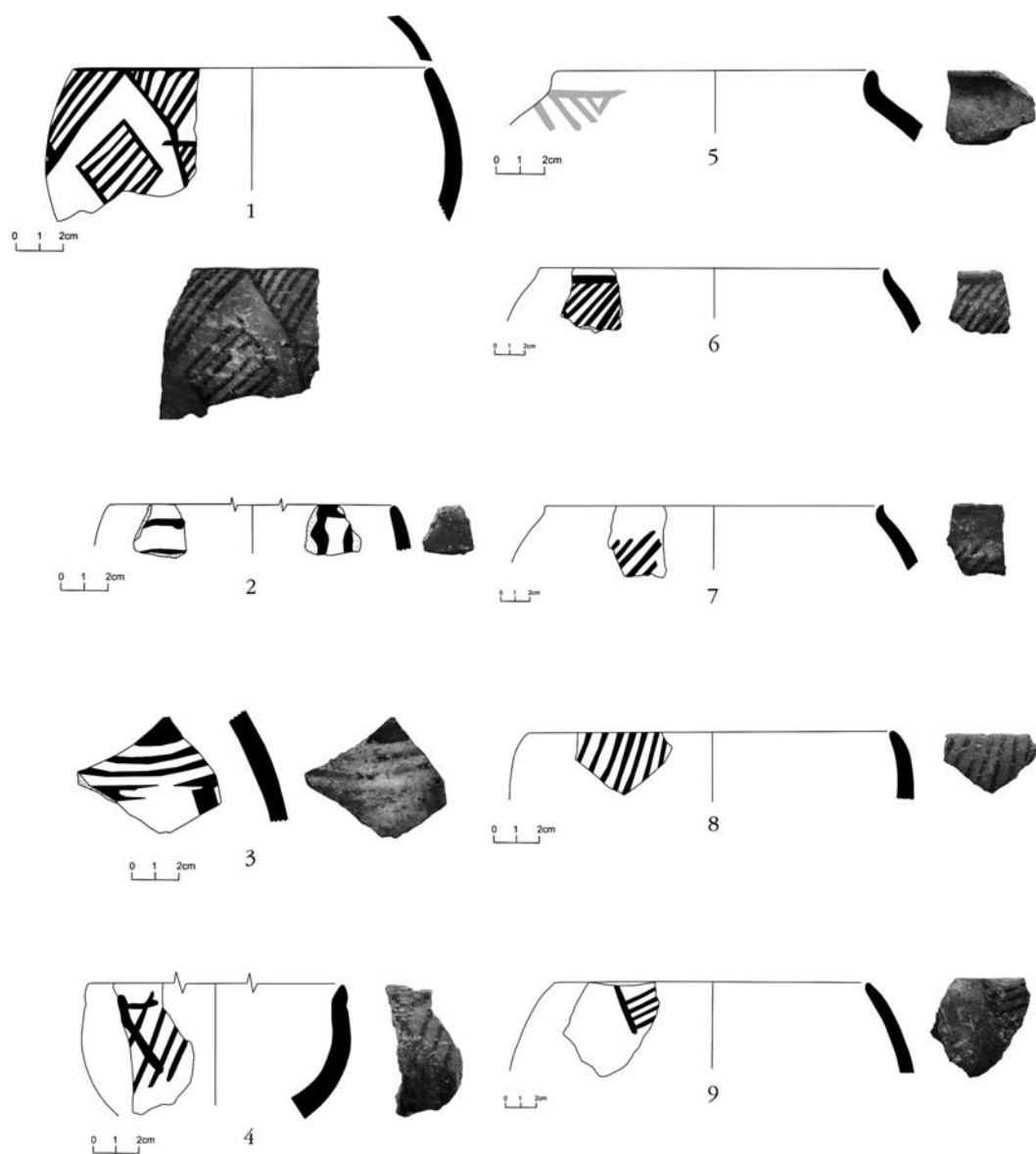


Fig. 8. Kul Tepe VIII. Pottery, 1-3: Locus 3028; 4-9: Locus 3027.

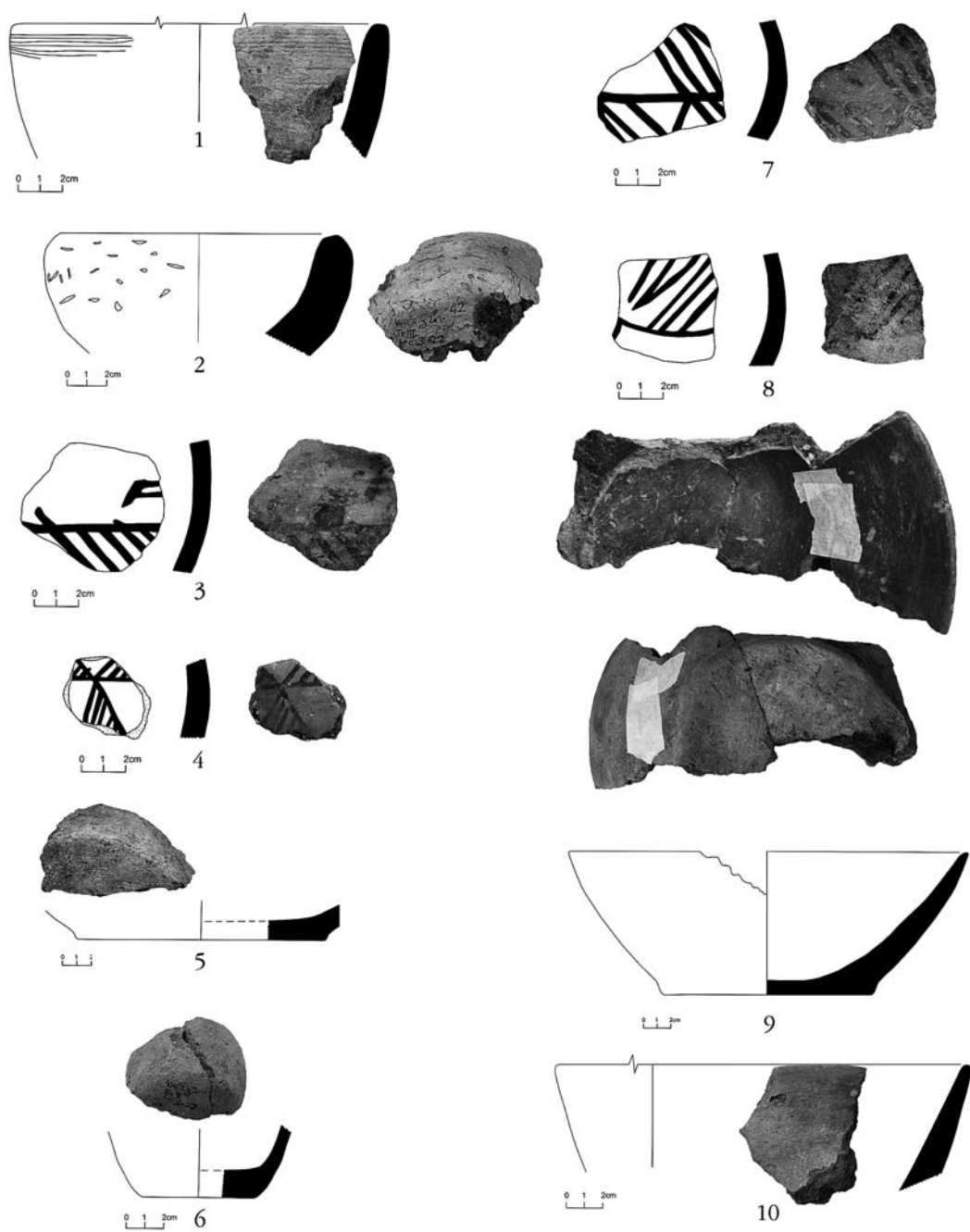


Fig. 9. Kul Tepe VIII. Pottery, 1-8: Locus 3027; 9-10: Locus 3026.



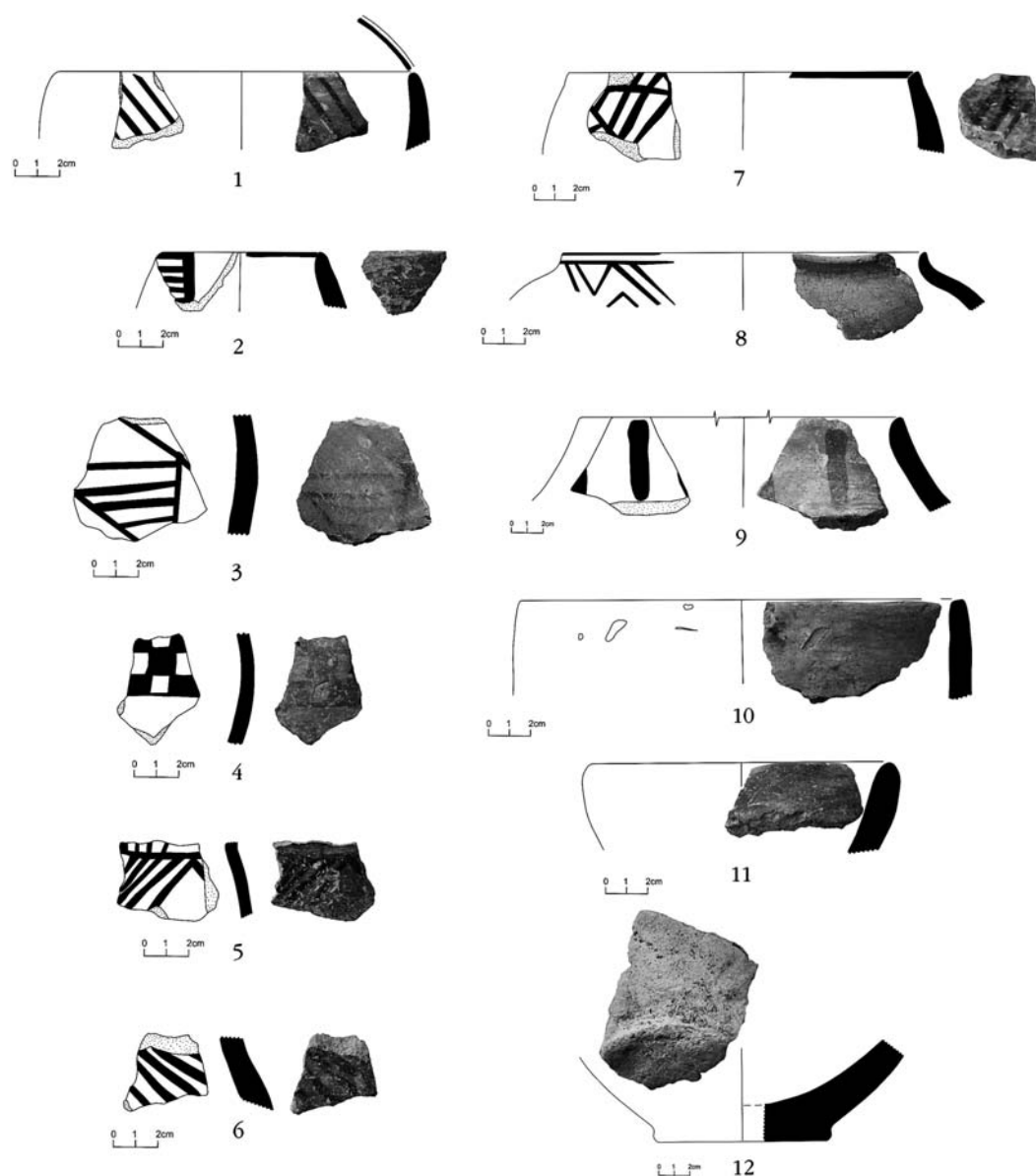


Fig. 10. Kul Tepe VIII. Pottery, 1-7: Locus 3026; 8-12: Locus 3025.

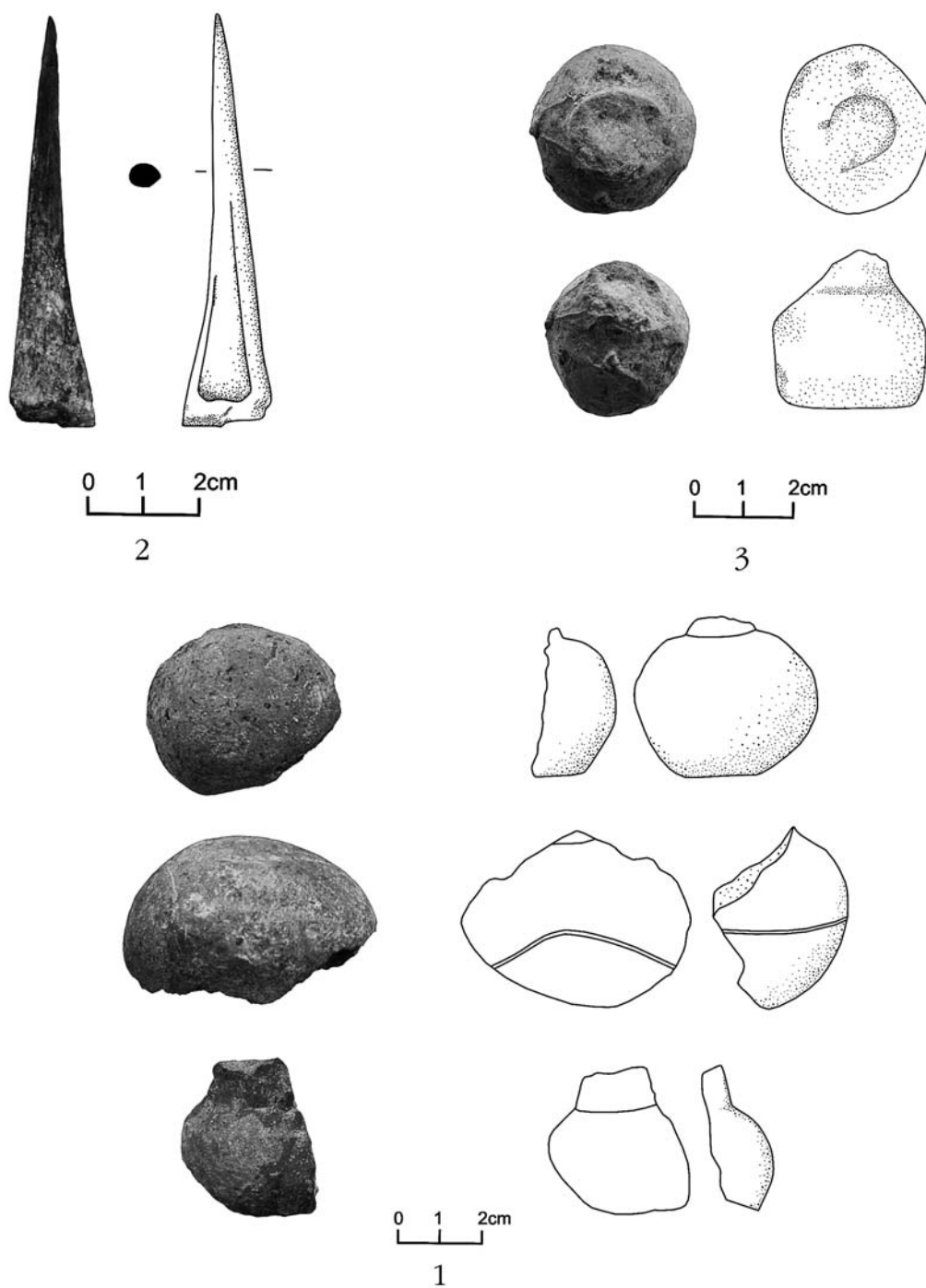


Fig. 11. 1 Kul Tepe VIII, Locus 3026, figurine (?) fragment; 2 Kul Tepe VIB, F. 3007, Bone awl; Kul Tepe VIB, Locus 3015, unknown figurine or scale like clay objects.

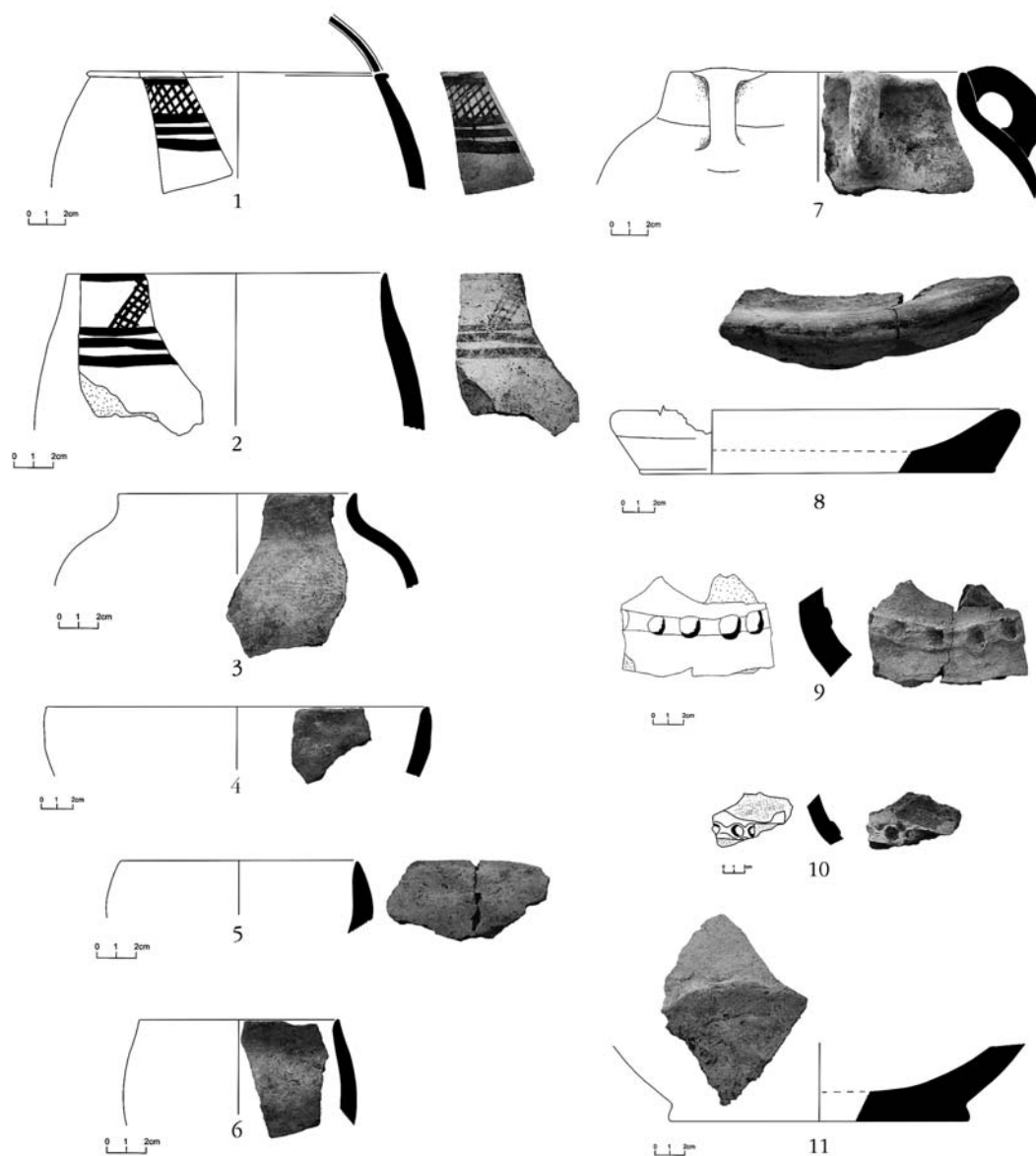


Fig. 12. Kul Tepe VII. Pottery, 1-11: Locus 3023.

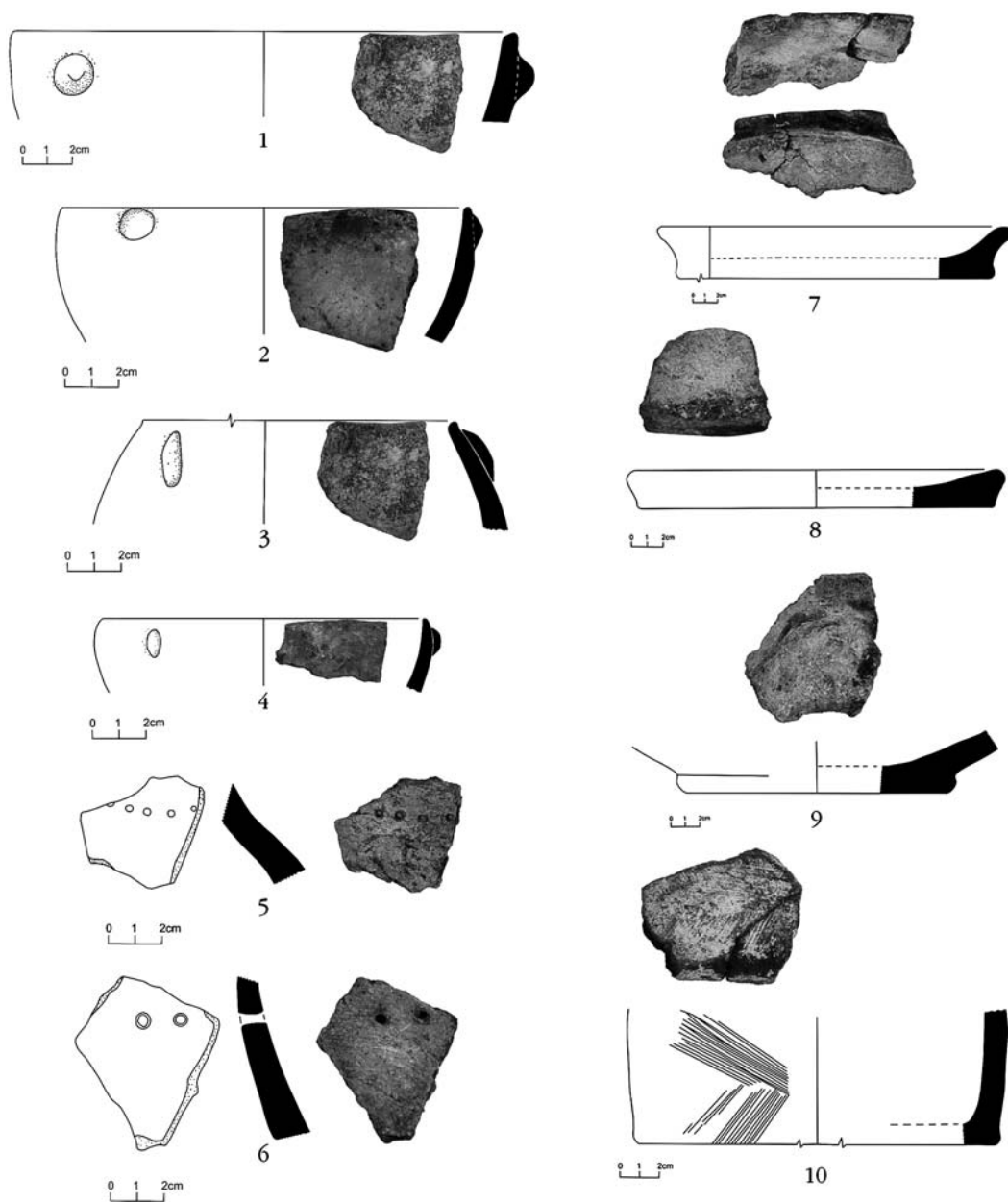


Fig. 13. Kul Tepe VII. Pottery, 1-10: Locus 3022.

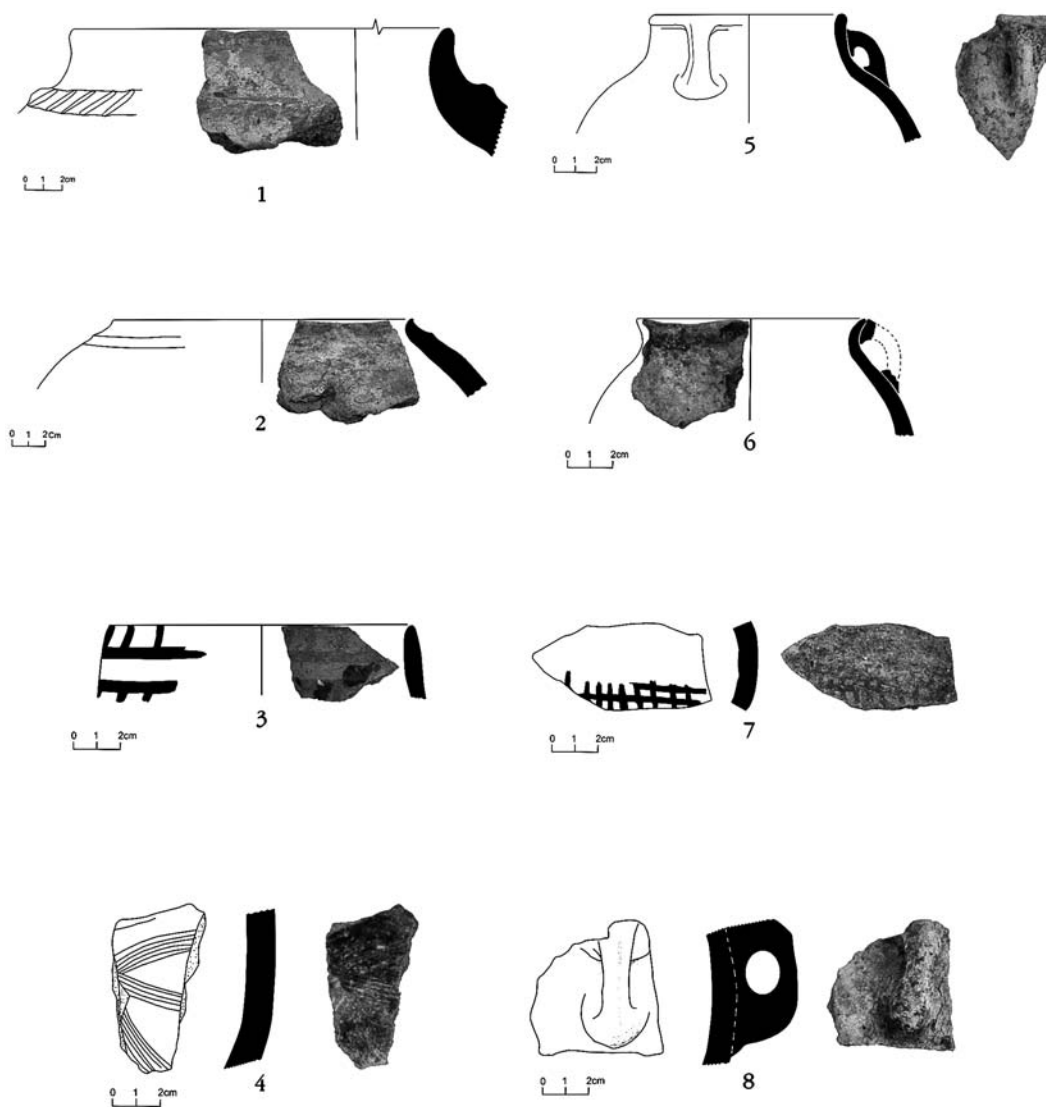


Fig. 14. Kul Tepe VII. Pottery, 1-8: Locus 3022.

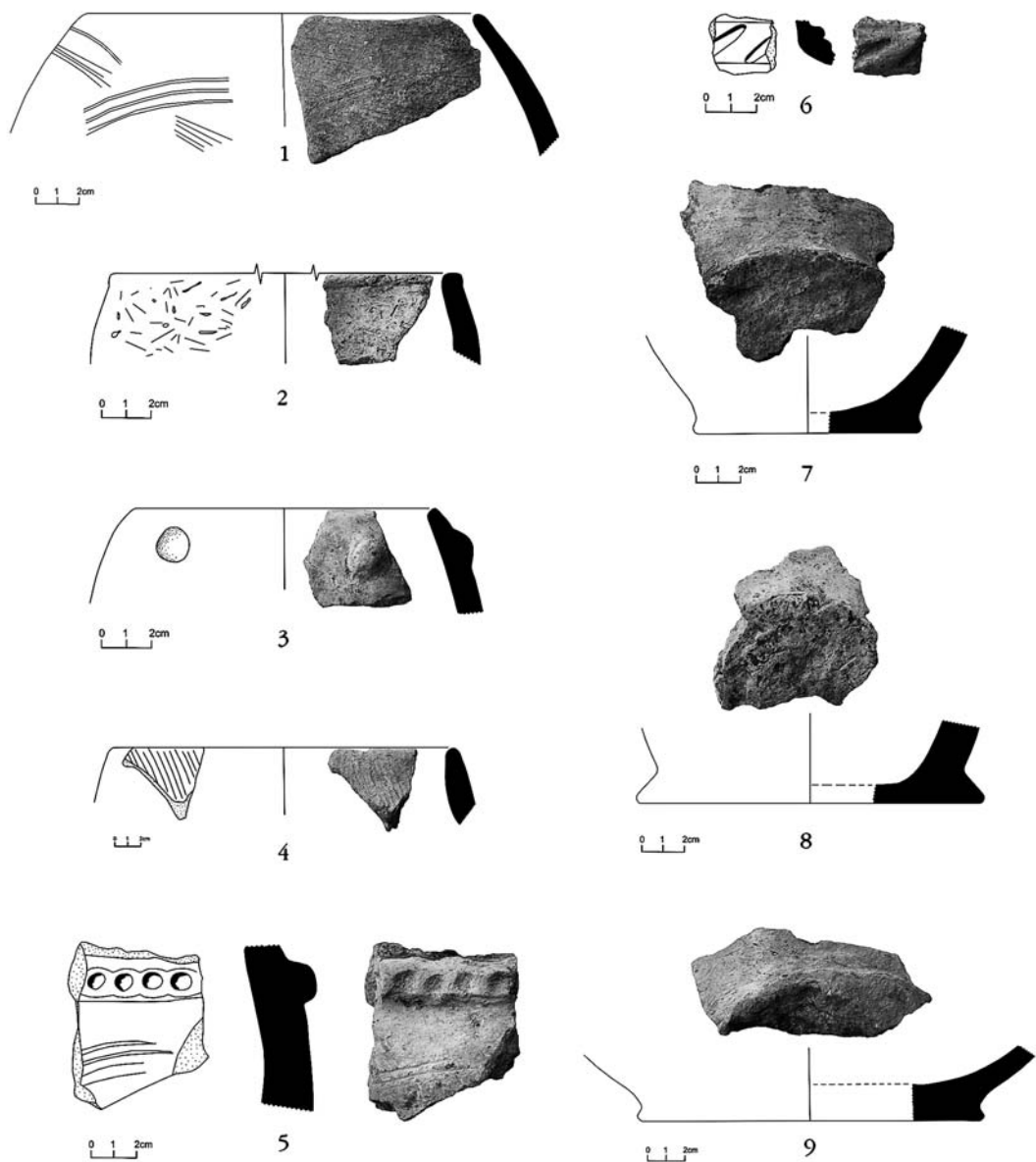


Fig. 15. Kul Tepe VII. Pottery, 1-9: Locus 3021.



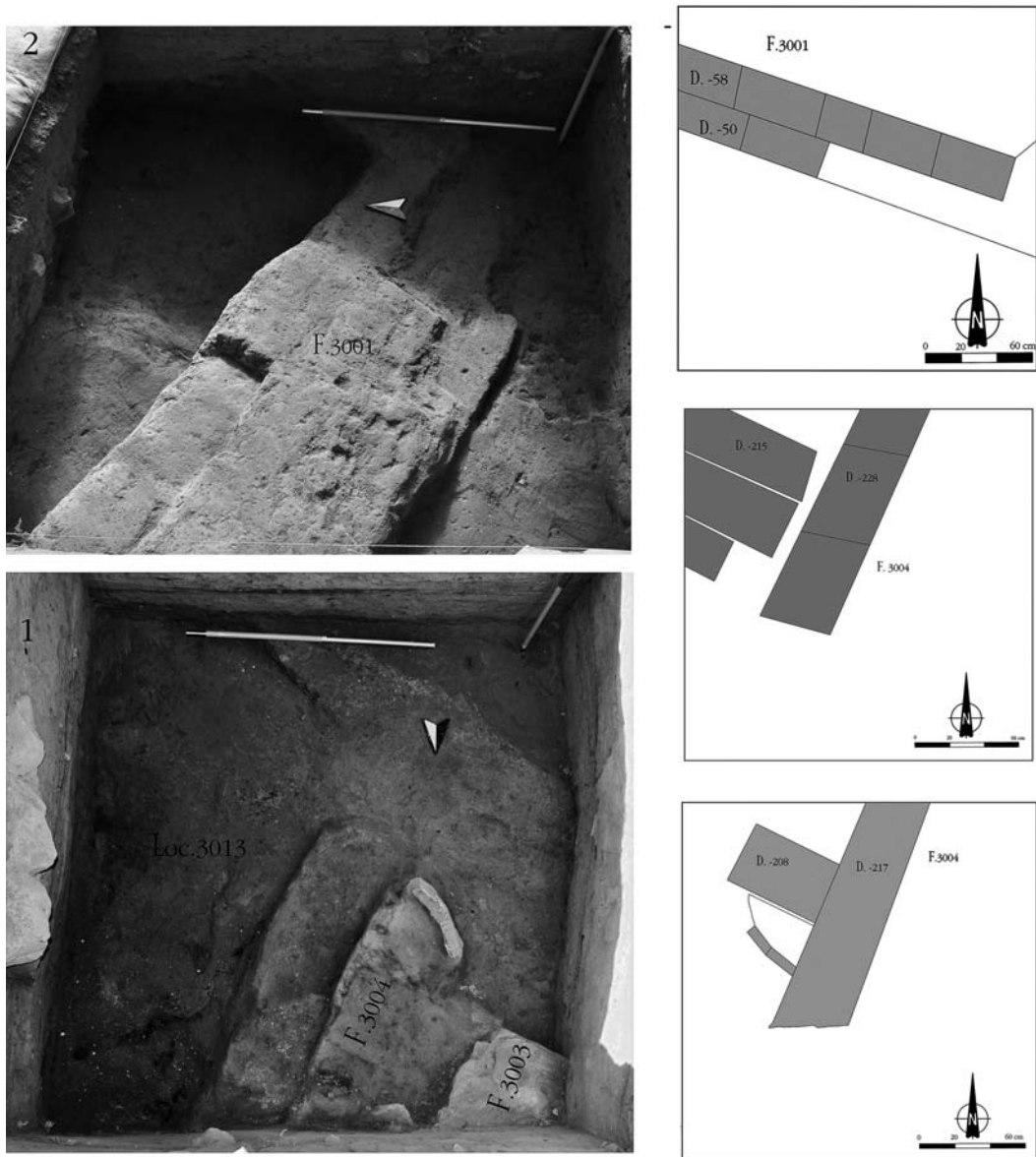


Fig. 16. 1 Kul Tepe VIB: F. 3003–3004, Trench III. Mud-brick Structure with Stone Foundation;  
 2 Kul Tepe VIA: F. 3001, Trench III. Mud-brick Structure with Stone Foundation.

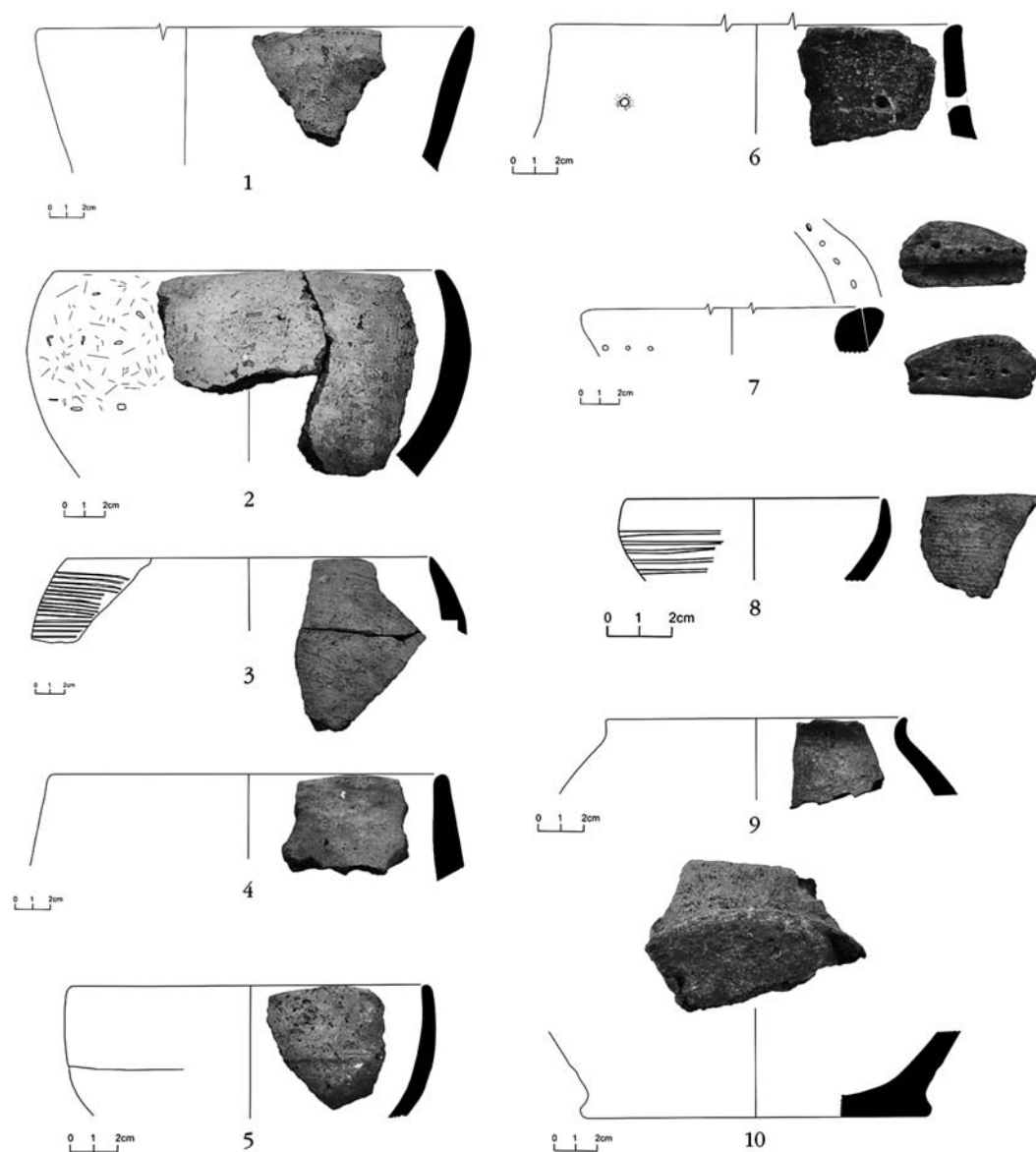


Fig. 17. Kul Tepe VIB. Pottery, 1-10: Locus 3020.

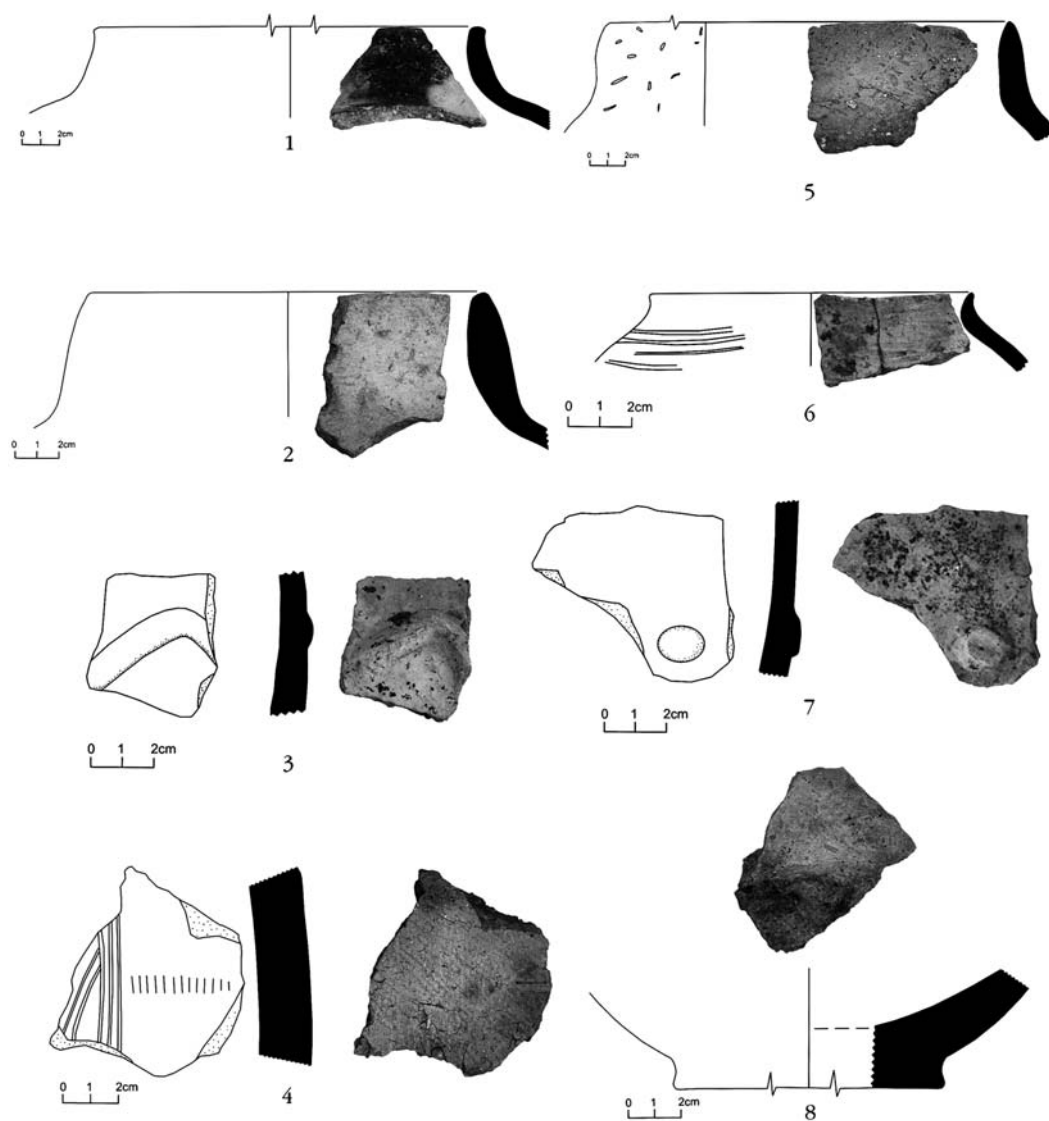


Fig. 18. Kul Tepe VIB. Pottery, 1-8: Locus 3018.

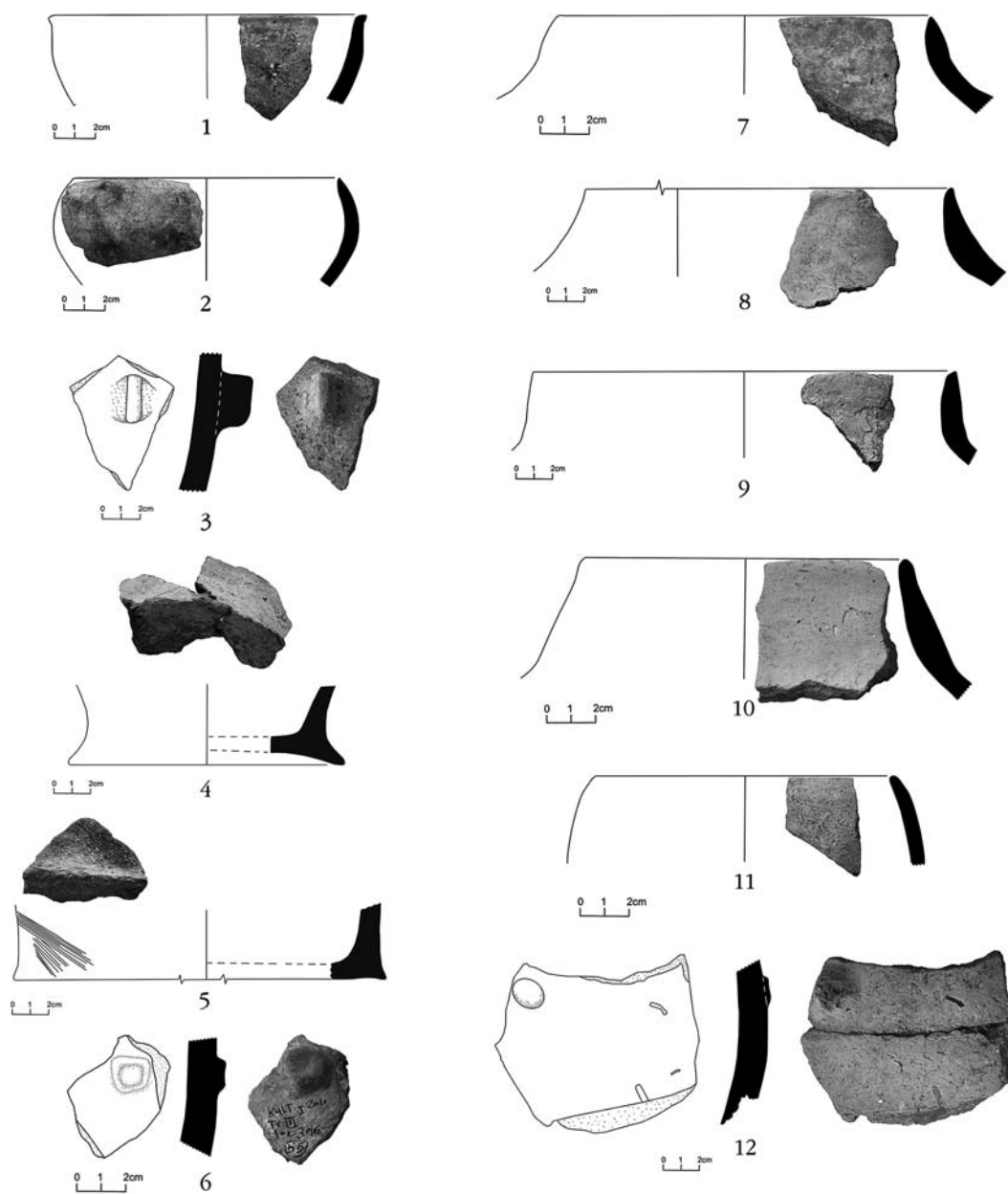


Fig. 19. Kul Tepe VIB. Pottery, 1-5: F. 3007; 6-12: Locus 3016.

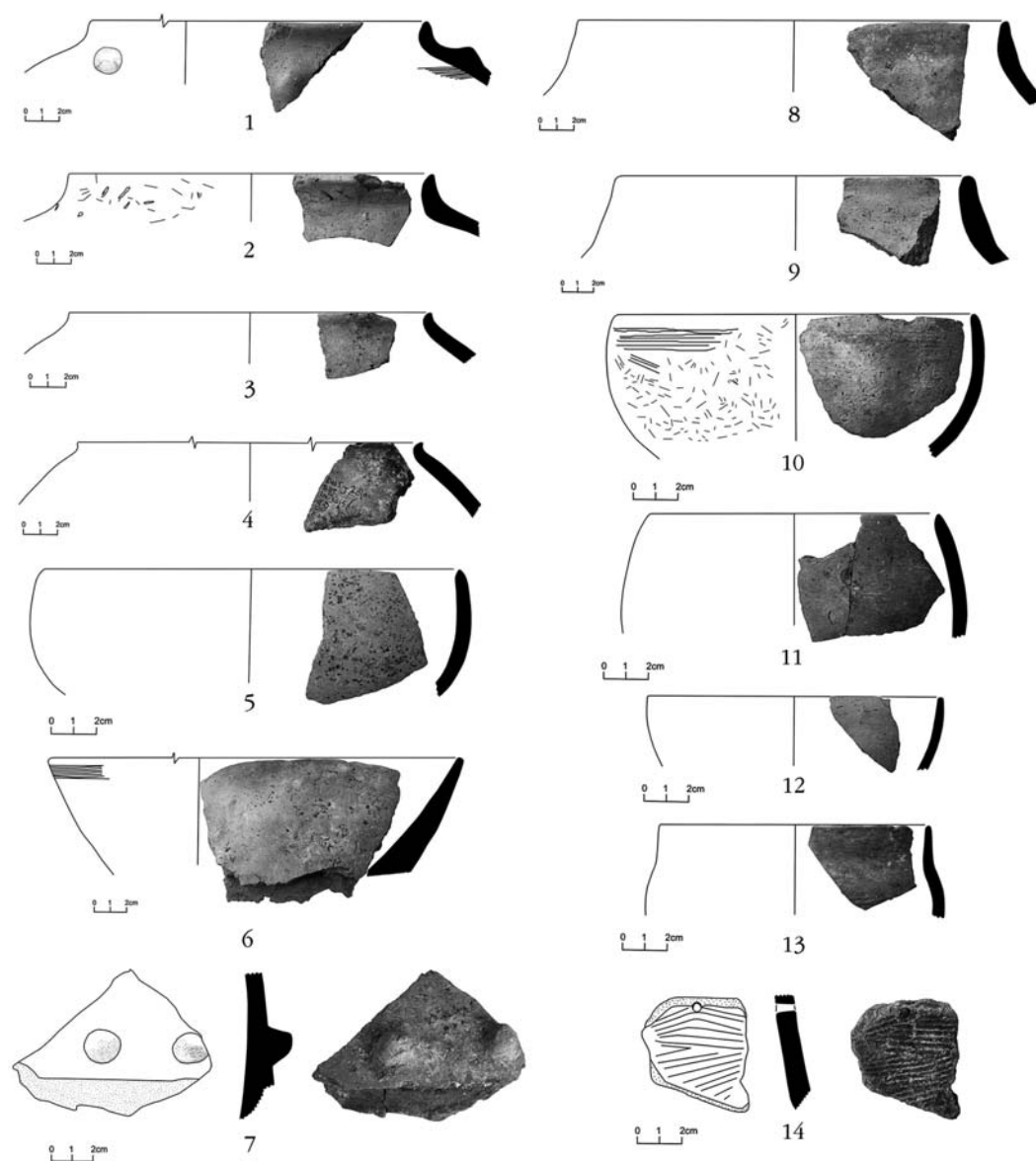


Fig. 20. Kul Tepe VIB. Pottery, 1–7: Locus 3015; 8–14: Locus 3014.

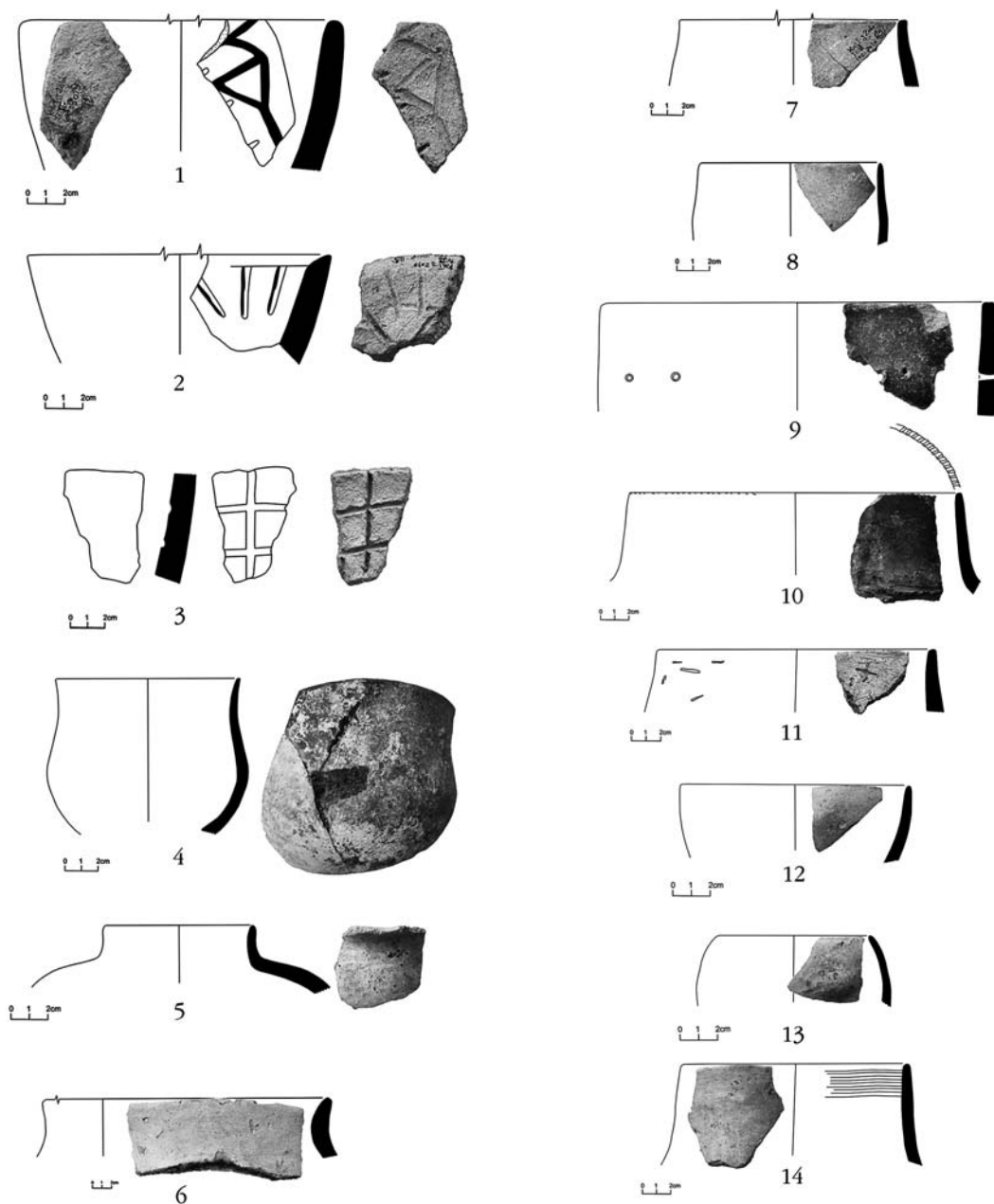


Fig. 21. Kul Tepe VIB. Pottery, 1-3: Locus 3013; 4-8: Locus 3010; 9-14: Locus 3008.



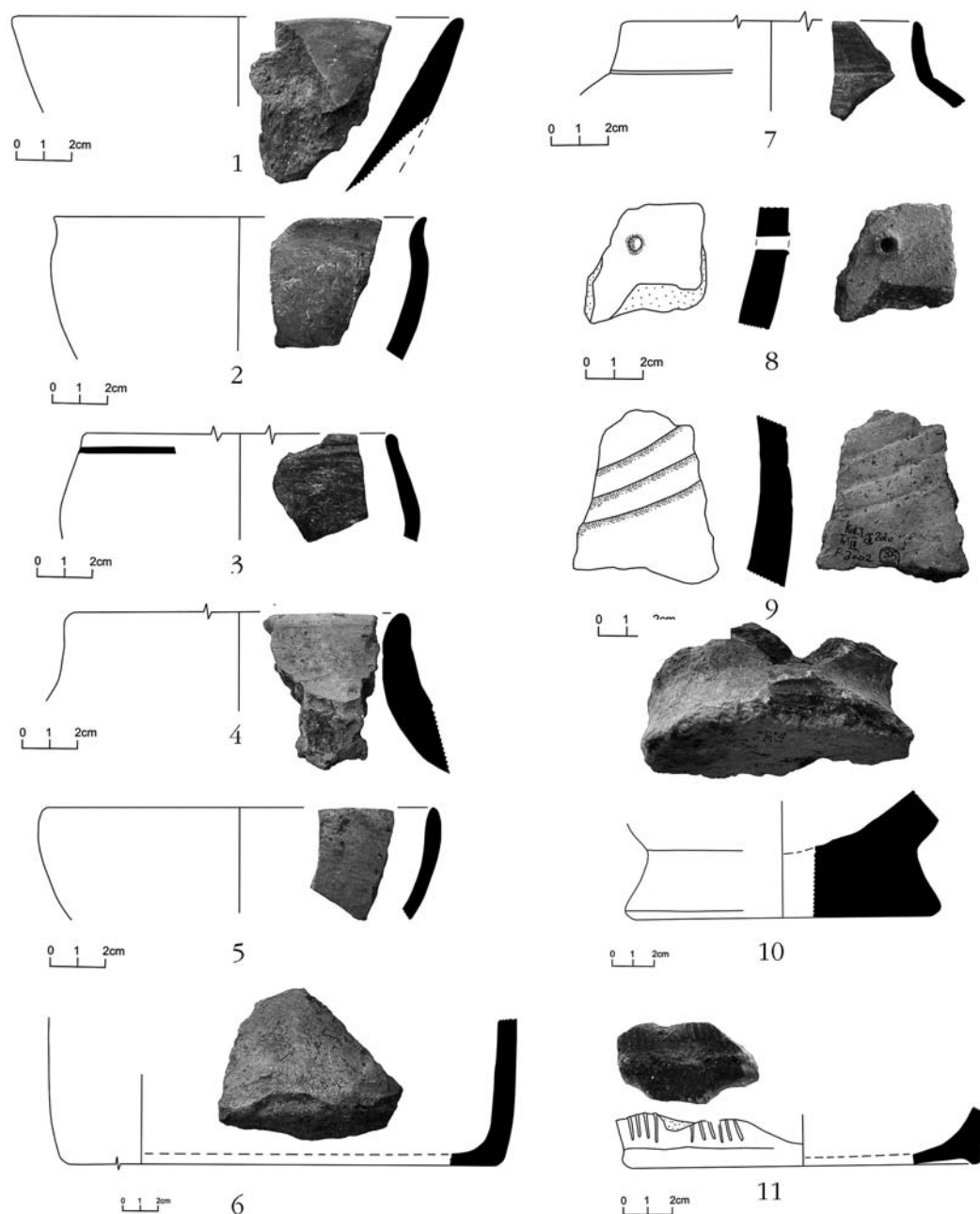


Fig. 22. Kul Tepe VIB. Pottery, I-II: F. 3002.

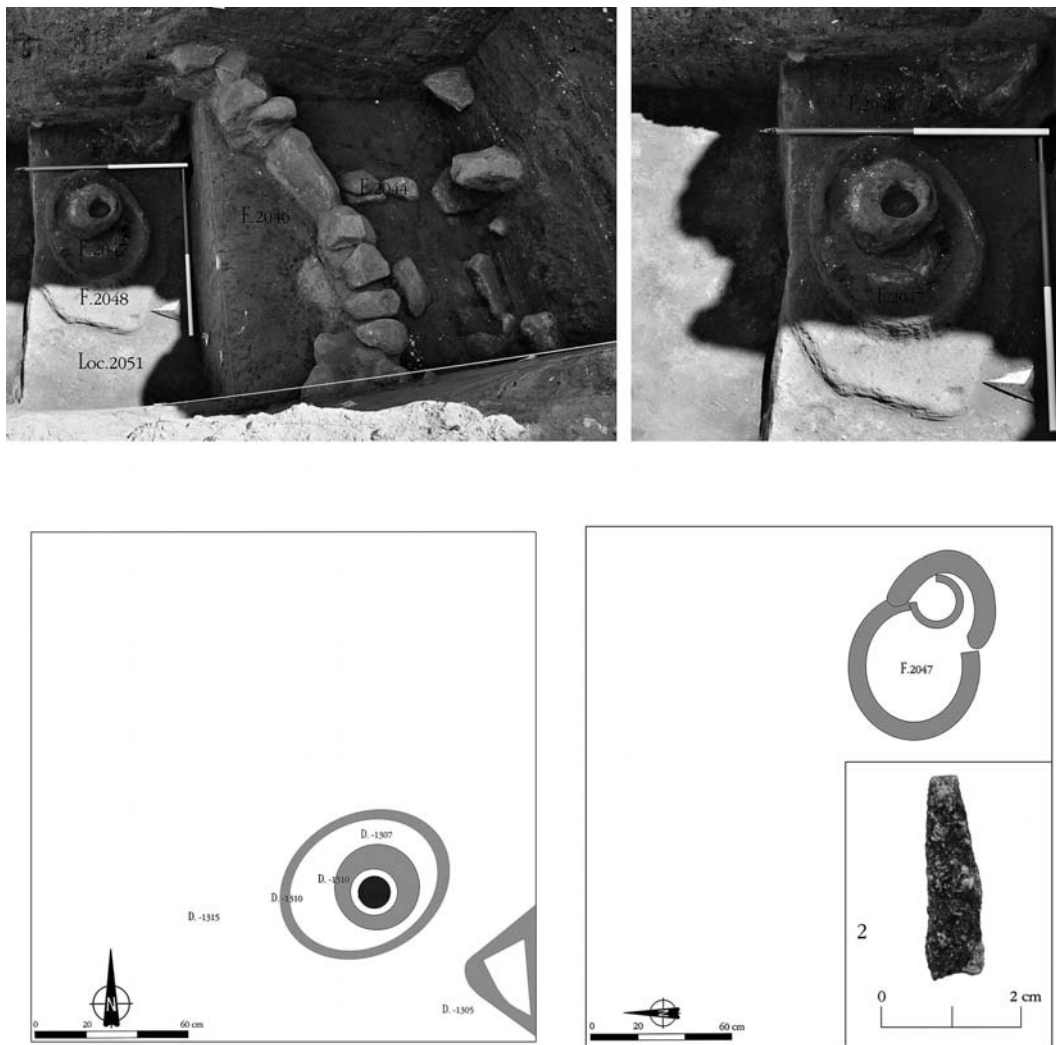


Fig. 23. 1 Kul Tepe VIA: F. 2047: metal furnace structure from Trench II;  
2 Kul Tepe VIA: Locus 3005: small metal object from Trench III.

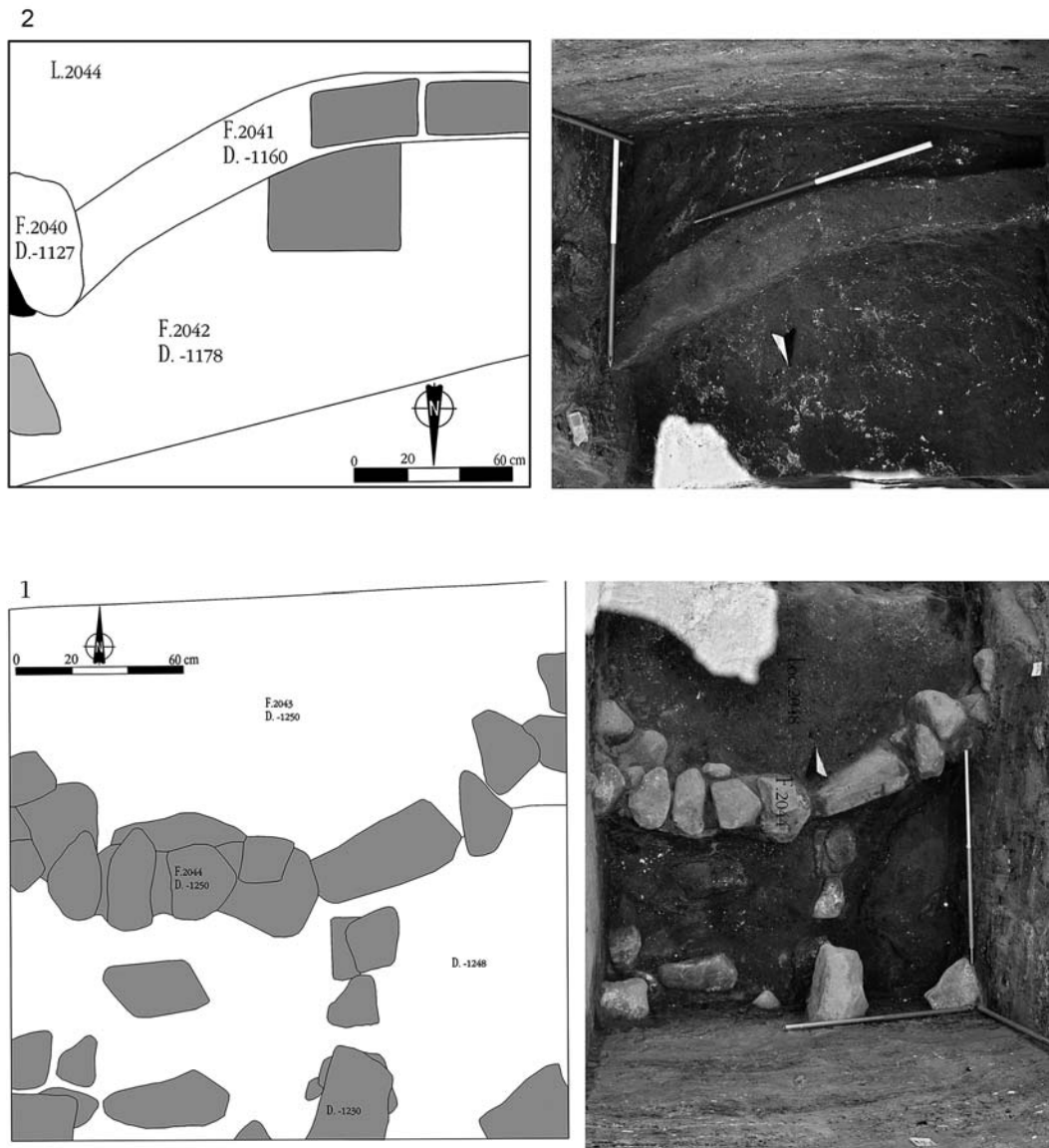


Fig. 24. 1 Kul Tepe VIA: F. 2044: Stone-built round structure with irregular stone, Trench II;  
 2 Kul Tepe V: F. 2041: Typical Kura-Araxes I Mud-brick Circular Structure, Trench II.

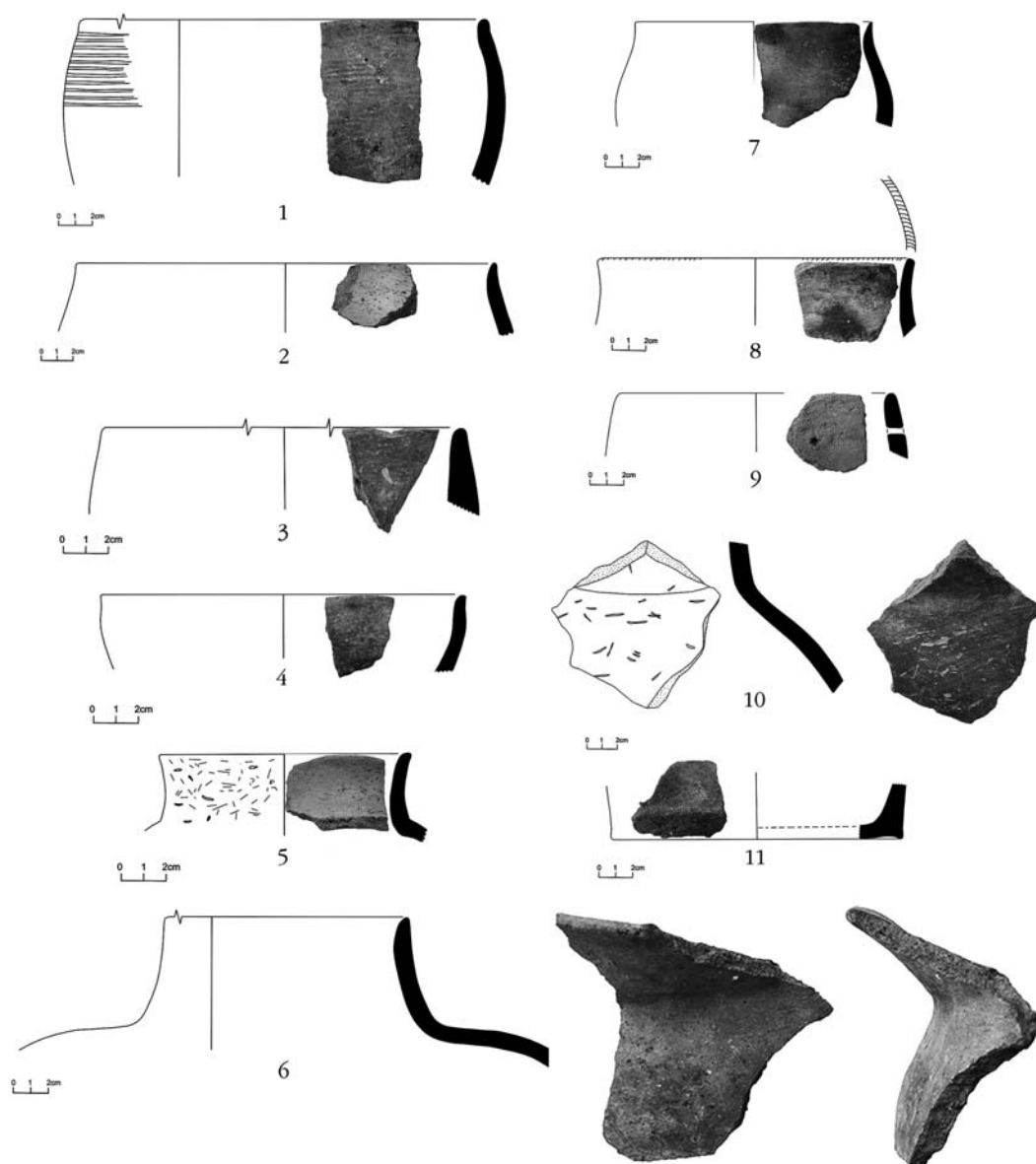


Fig. 25. Kul Tepe VIA. Pottery, 1-5: F. 3001; 6-11: Locus 3007.

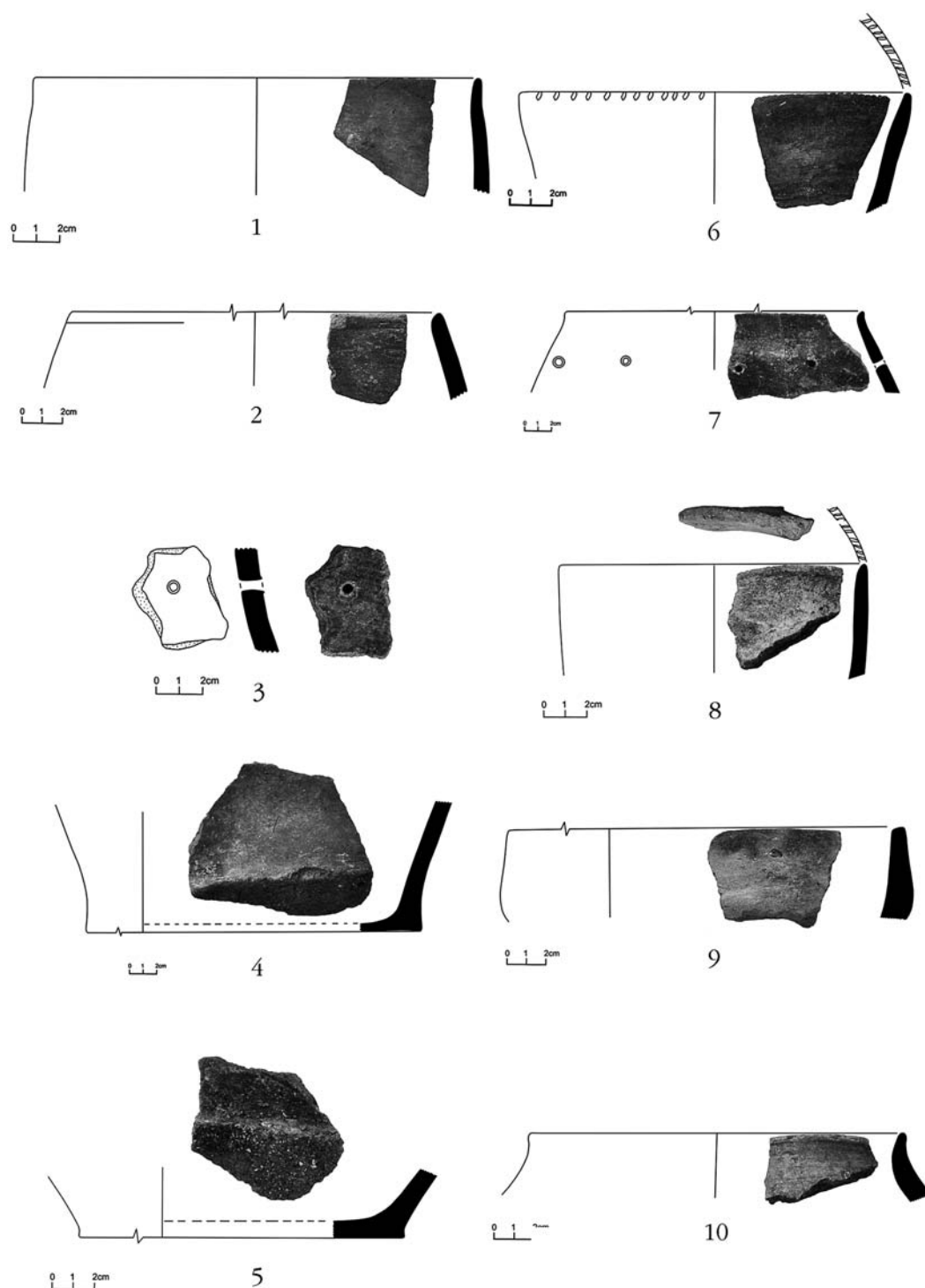


Fig. 26. Kul Tepe VIA. Pottery, 1-4: Locus 3006; 5-10: Locus 3005.

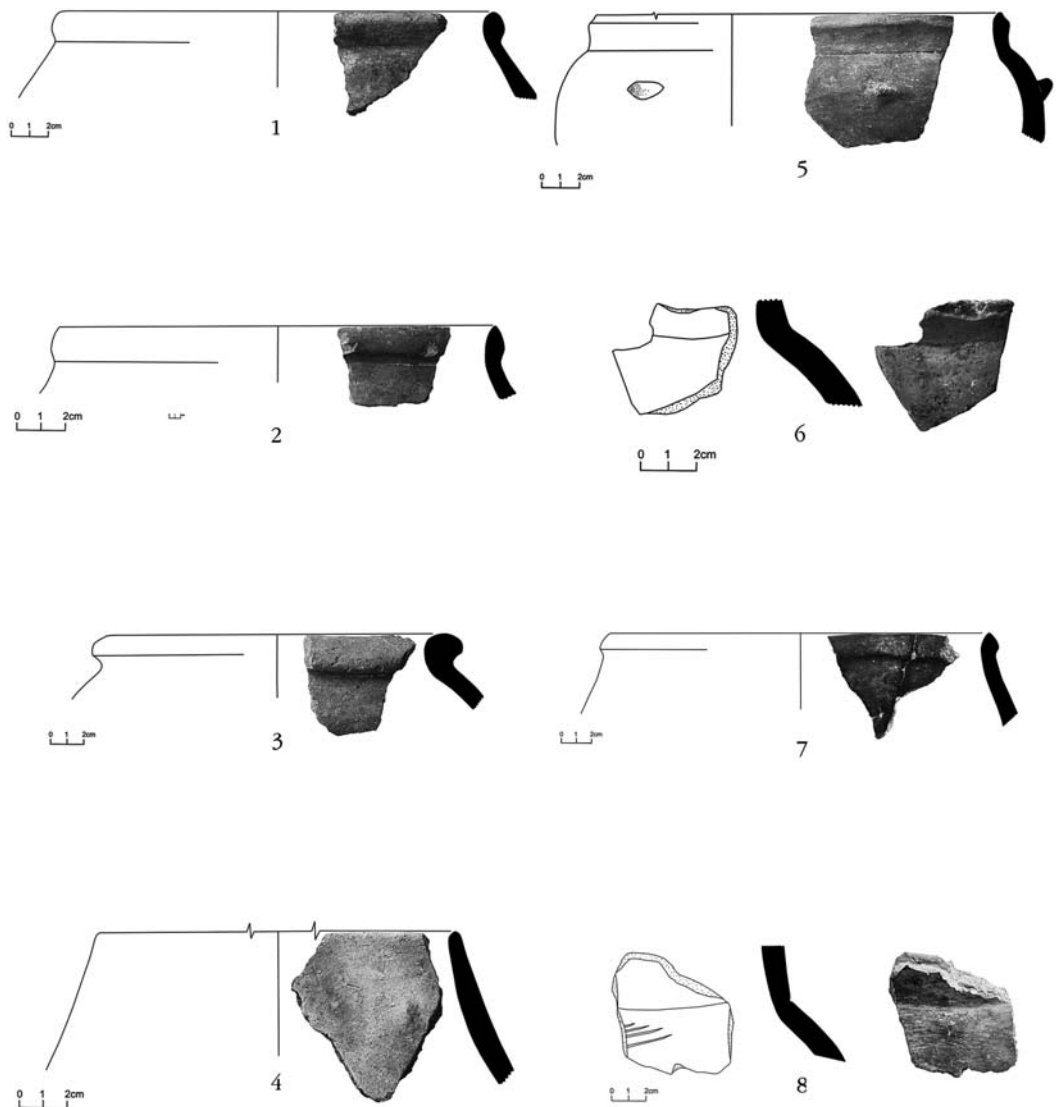


Fig. 27. Kul Tepe VIA. Pottery, 1-6: Locus 3004; 7-8: Locus 3002.



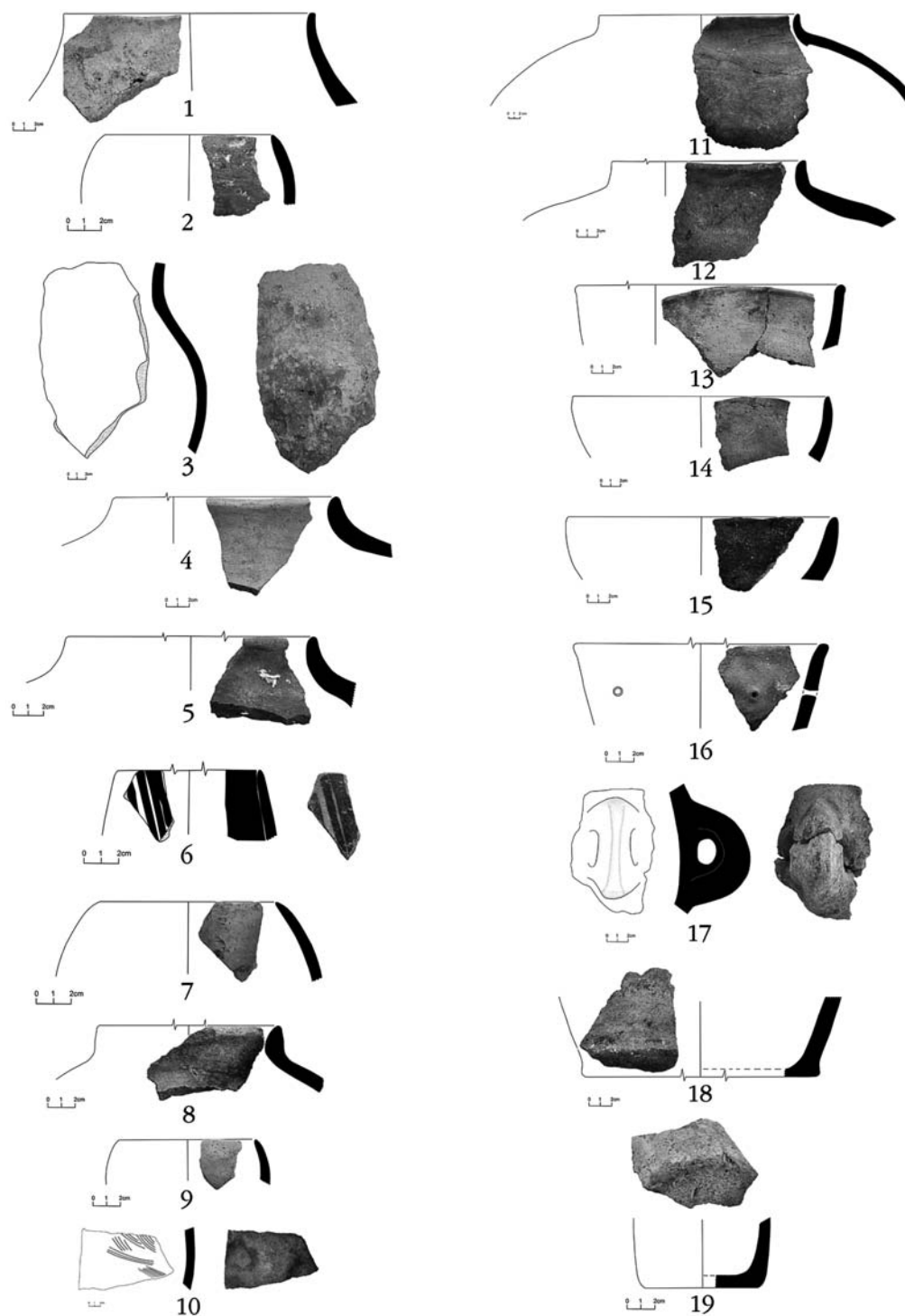


Fig. 28. Kul Tepe VIA. Pottery, 1-3: Locus 2055; 4-7: Locus 2053; 8-10, 19: F. 2049; 11-18: Locus 2054.

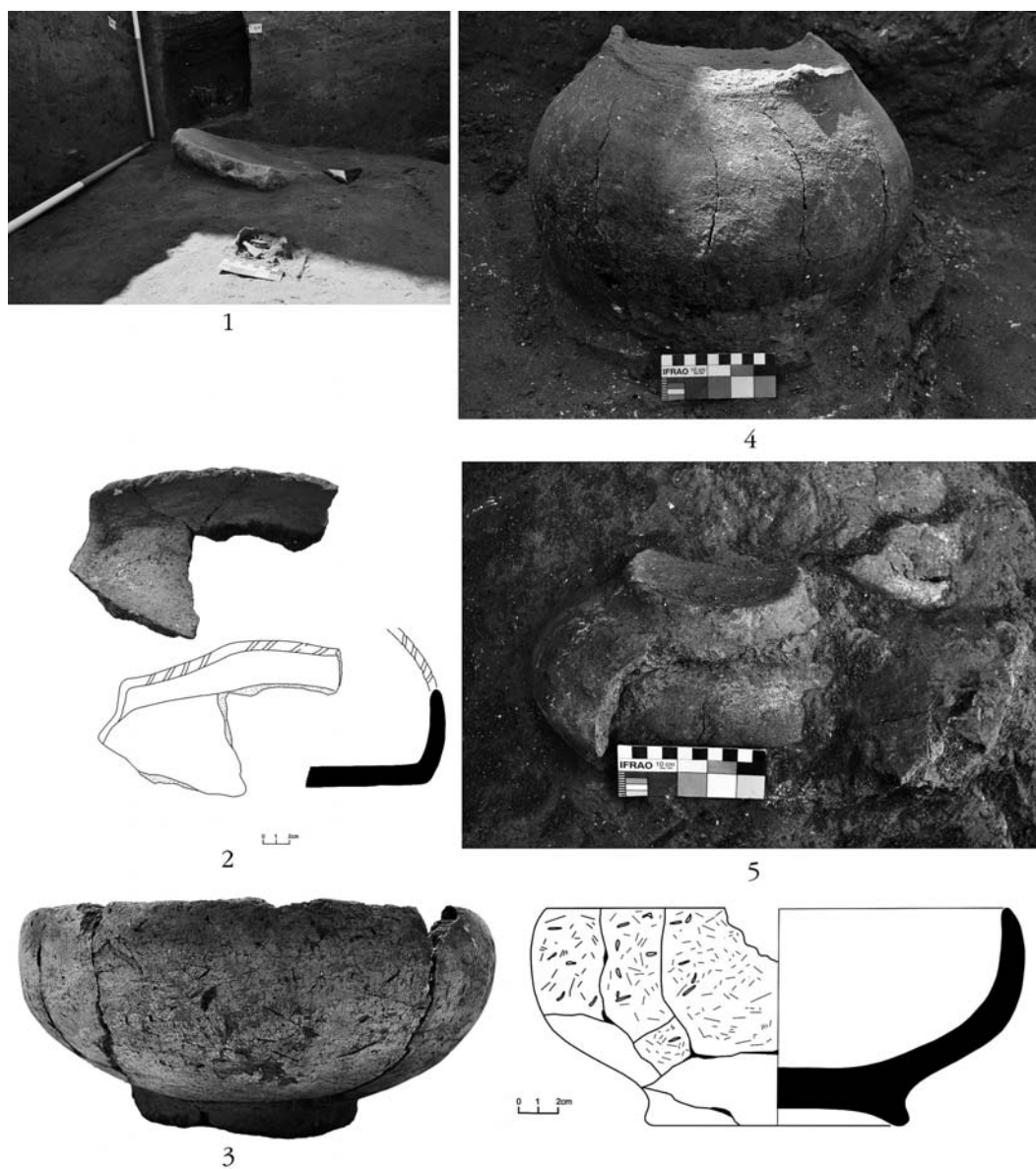


Fig. 29. 1 Kul Tepe VIA: Floor of F. 2049 with large quantity of chaff-faced ware horizon of LC3;  
 2 F. 2049: rail rim tray-like pottery;  
 3 F. 2049: typical chaff-faced, legged bowl;  
 4 F. 2049: jar with short neck and chaff-faced surface;  
 5 F. 2049: everted rim jar with short neck and chaff-faced surface.

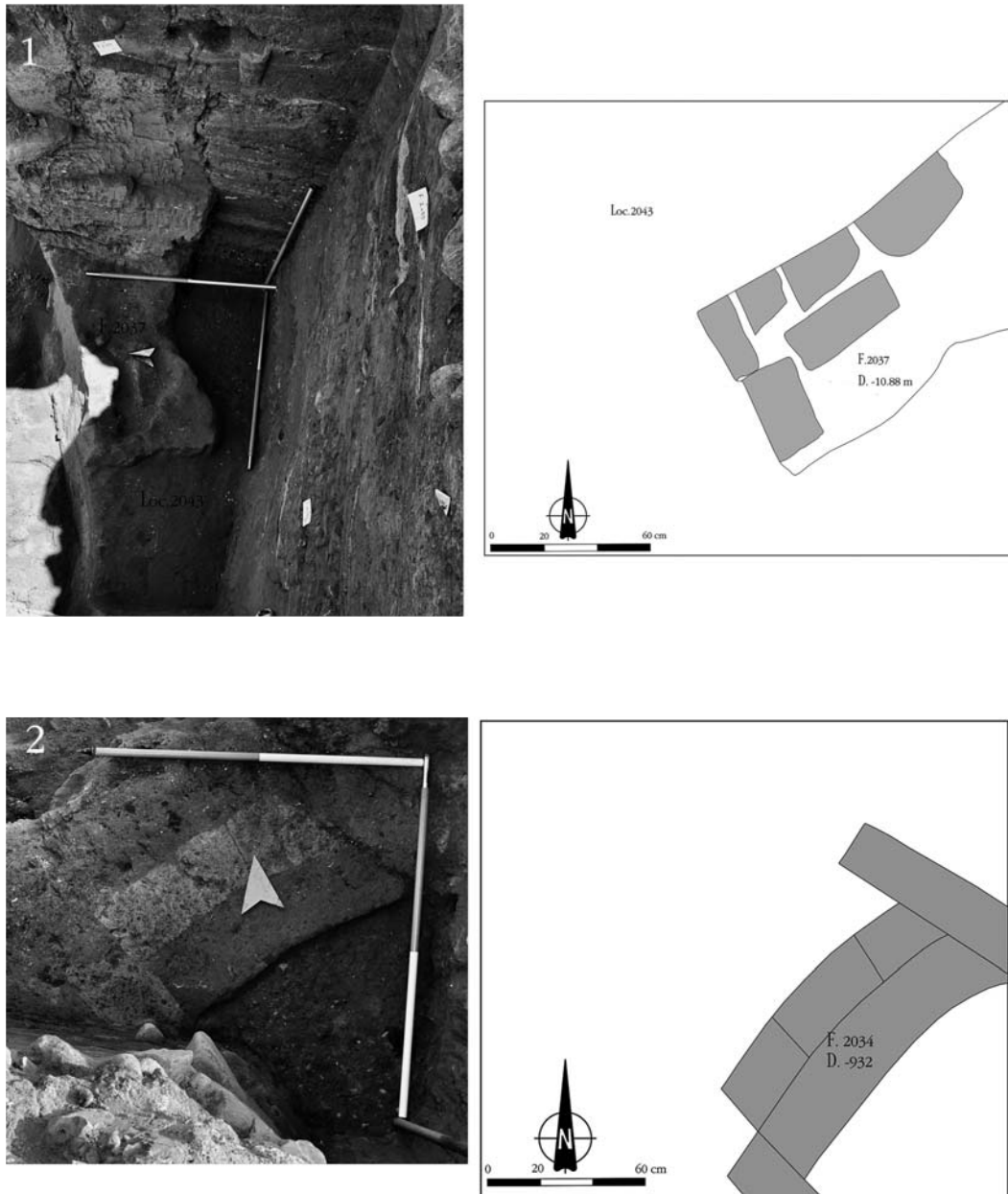


Fig. 30. 1 Kul Tepe V (F. 2037): mud-brick structure, Trench II;  
2 Kul Tepe IV (F. 2034): typical Kura-Araxes mud-brick circular structure, Trench II.

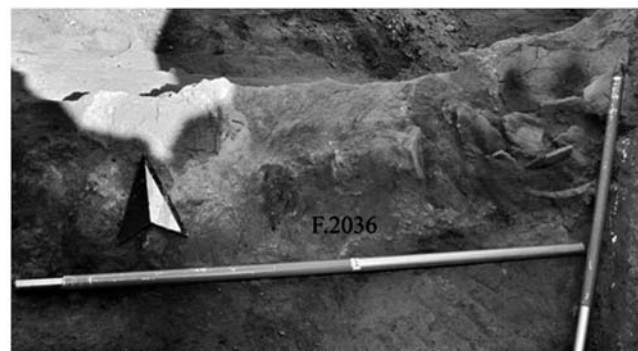
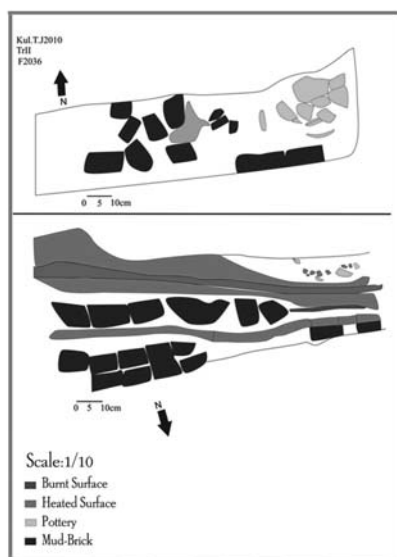


Fig. 31. Kul Tepe V: Kura-Araxes I (F. 2036) pottery kiln; pit firing pottery kiln.

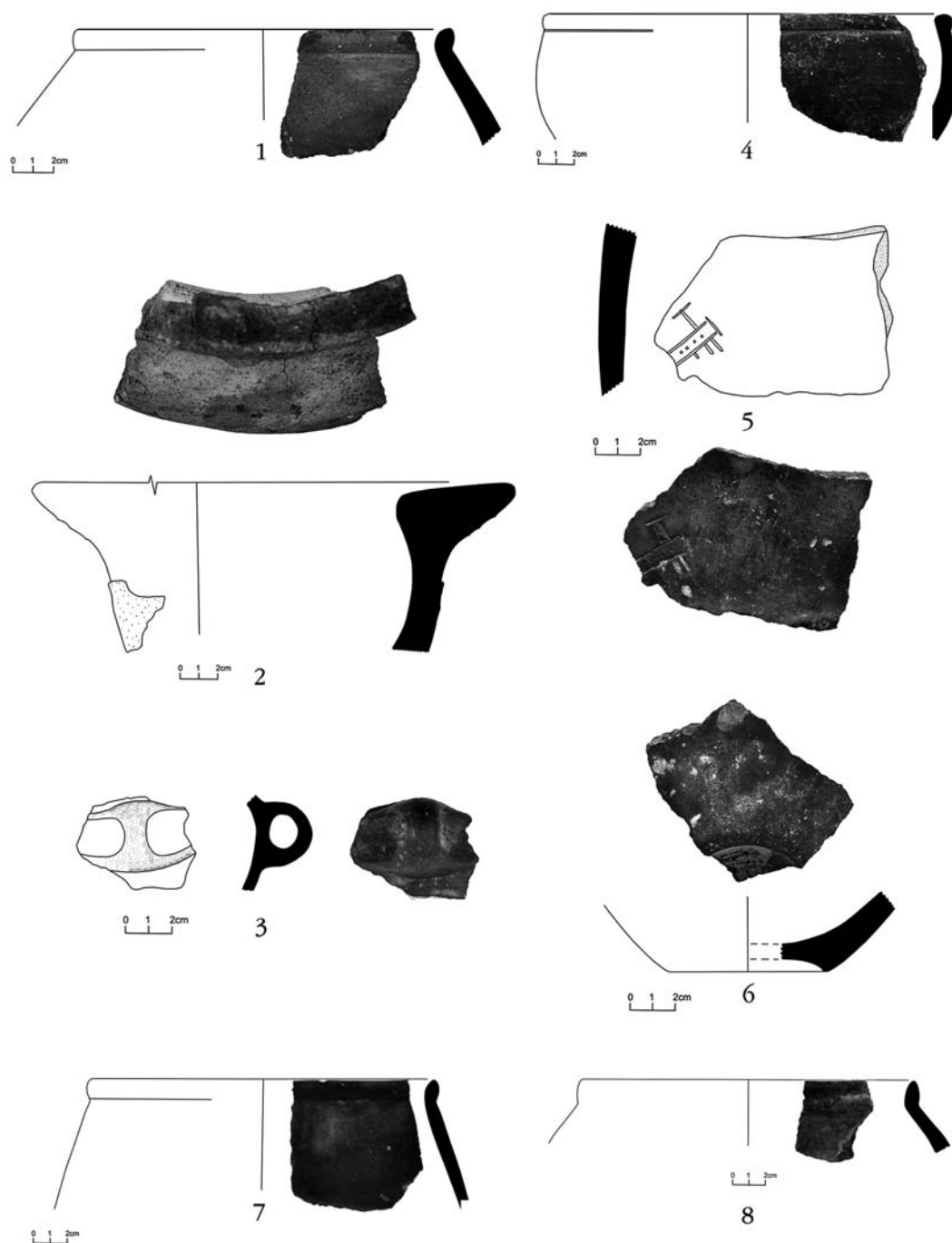


Fig. 32. Kul Tepe V. Pottery, 1-3: Locus 2046; 4-6: Locus 2044; 7-8: Locus 2045.

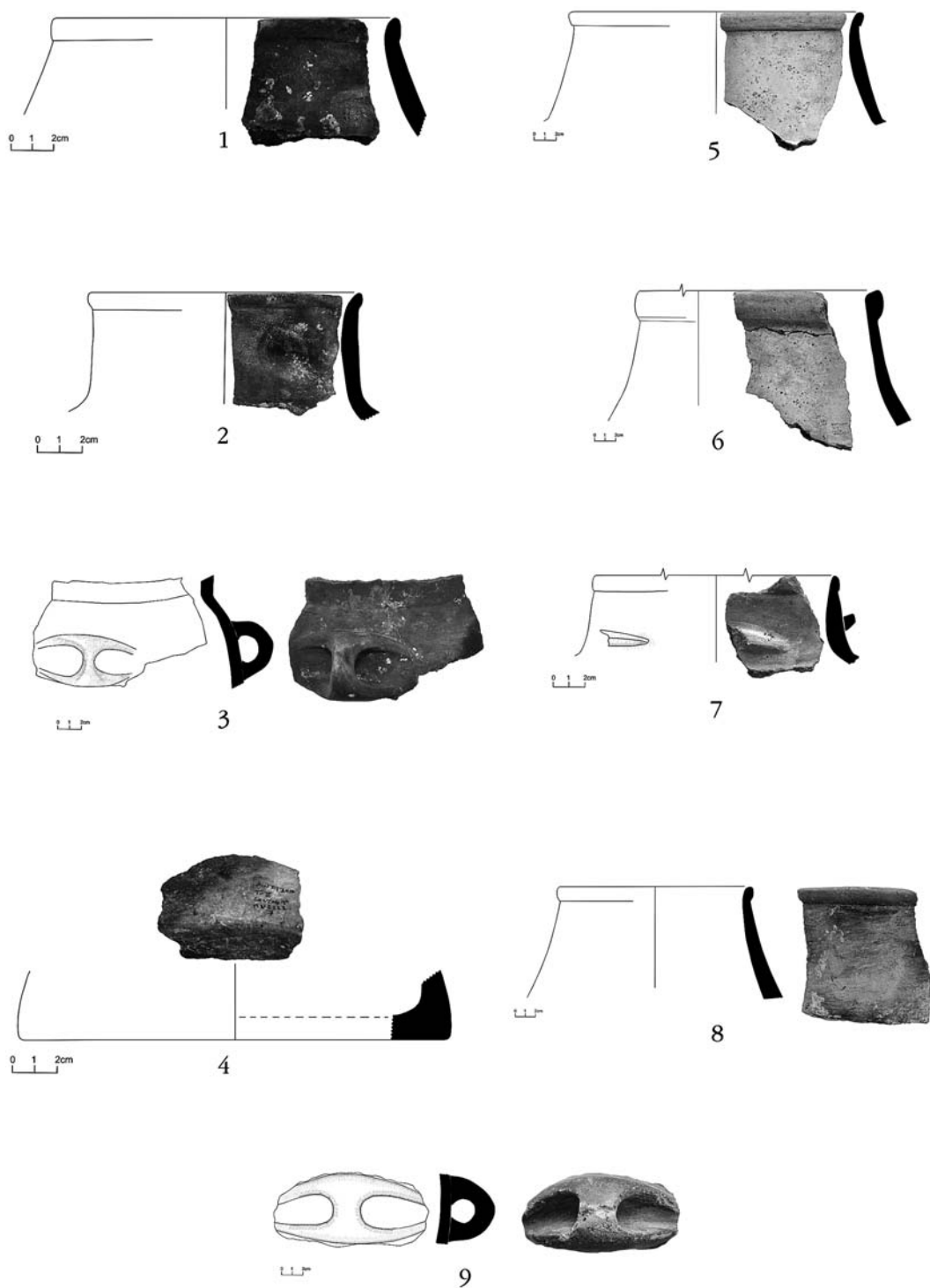


Fig. 33. Kul Tepe V. Pottery, 1-4: Locus 2043; 5-9: F. 2038.



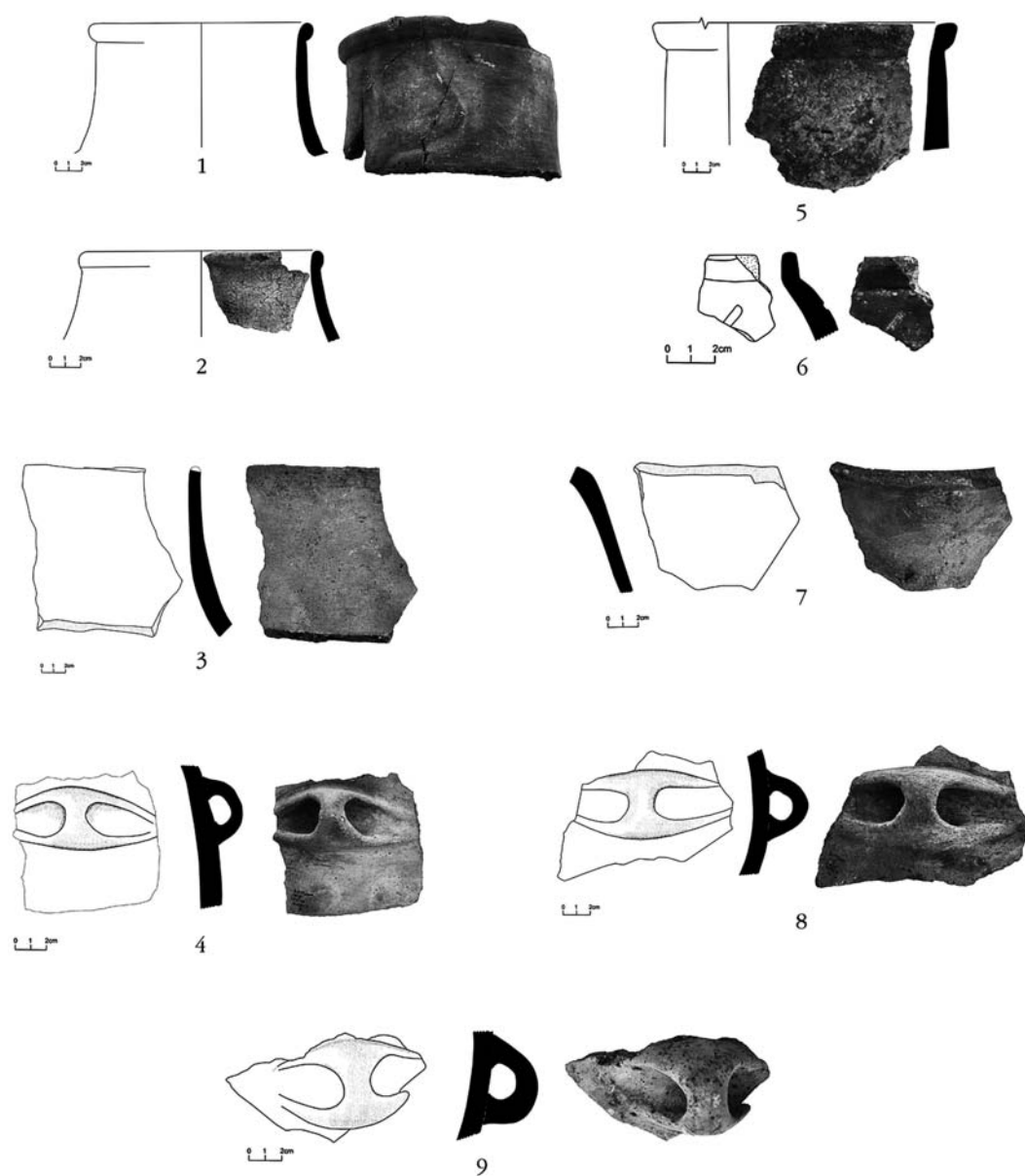


Fig. 34. Kul Tepe V. Pottery, 1-9: F. 2036.

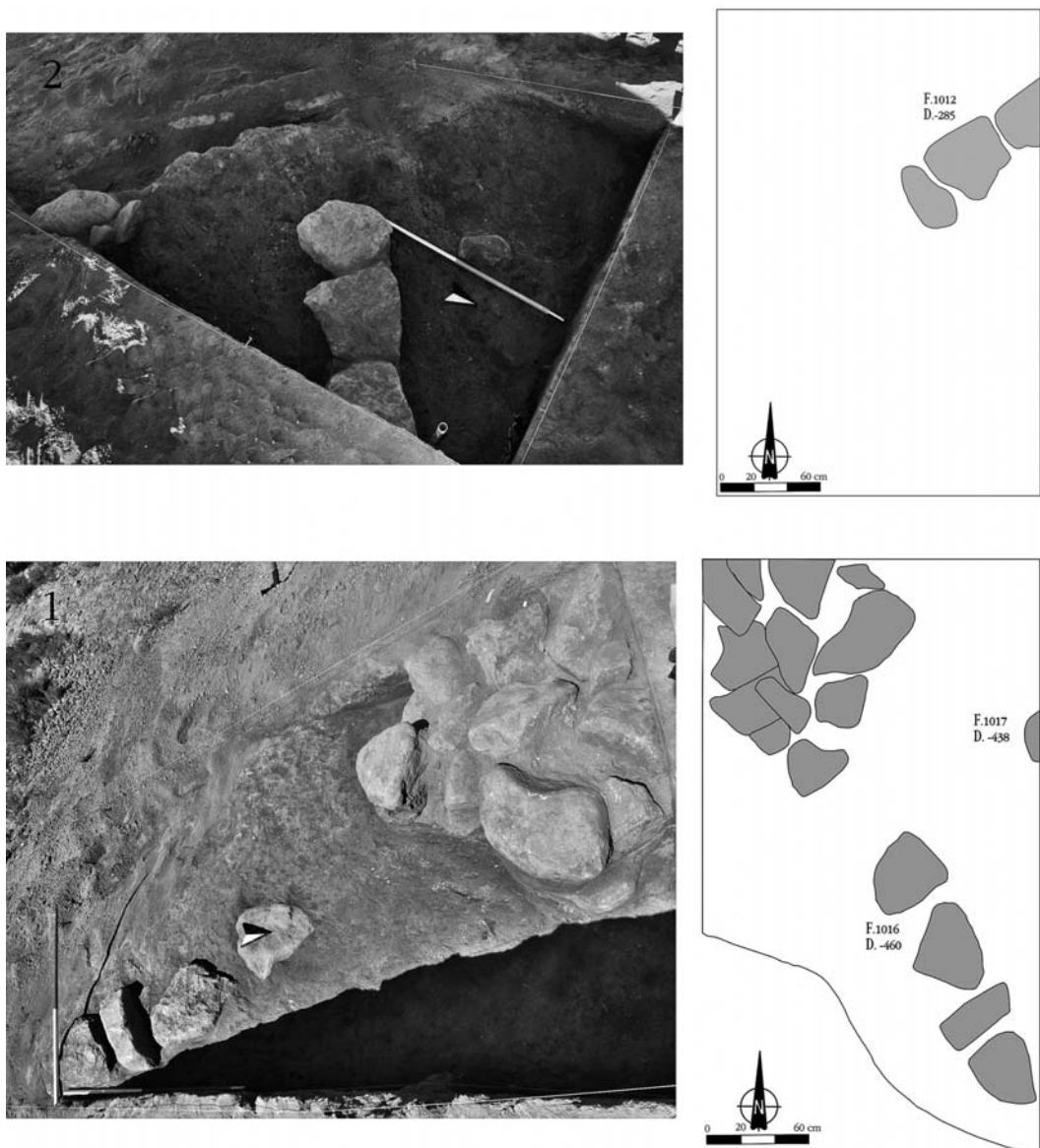


Fig. 35. 1 Kul Tepe IV (F. 1016–1017): stone-built structure, Trench I;  
2 Kul Tepe IV (F. 1012): stone-built structure, Trench I.

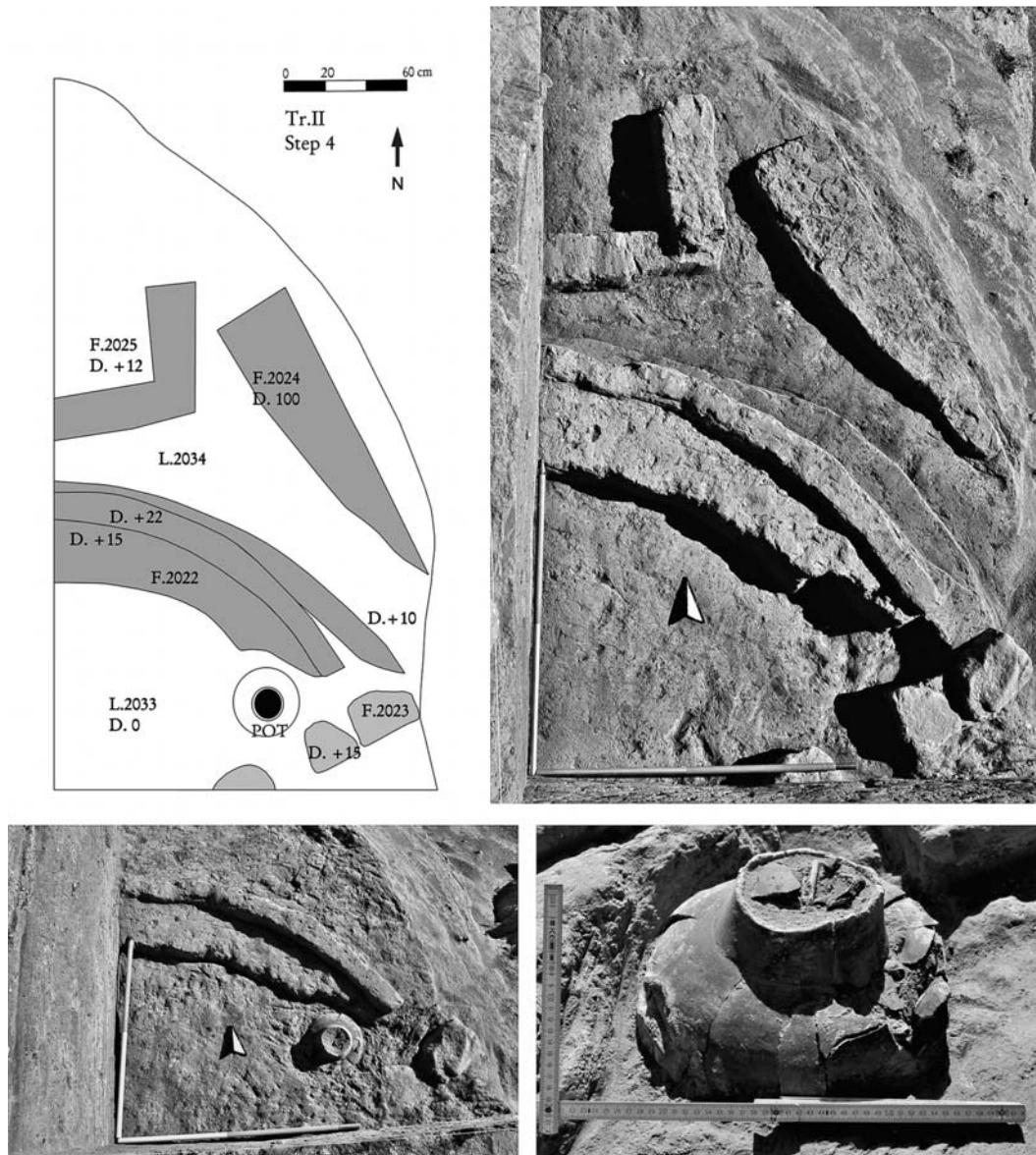


Fig. 36. Kul Tepe IV (F. 2022-2025): typical Early Bronze Age circular structure, with triple-handled jar and wattle and daub signs on the floor, Trench II.

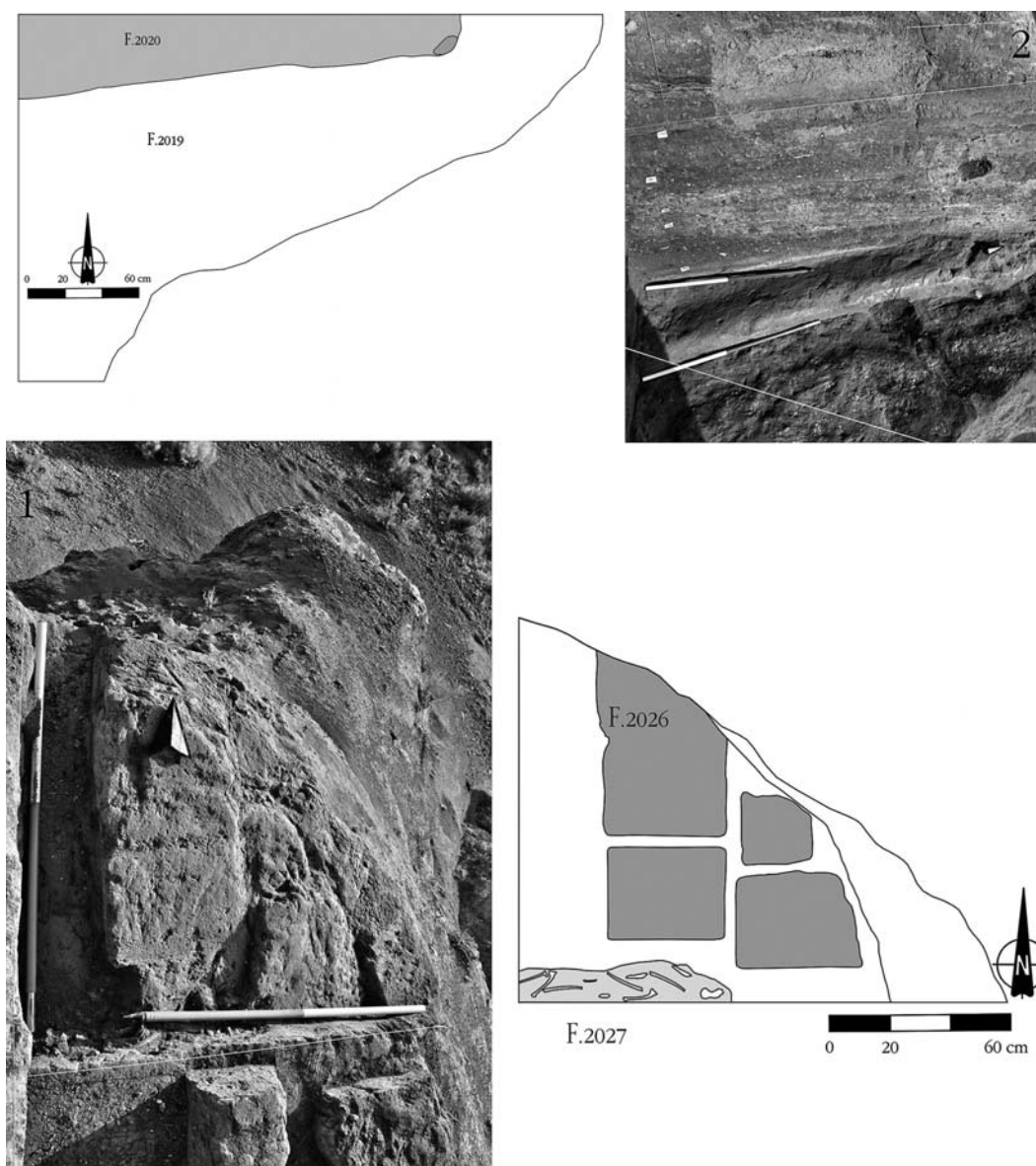
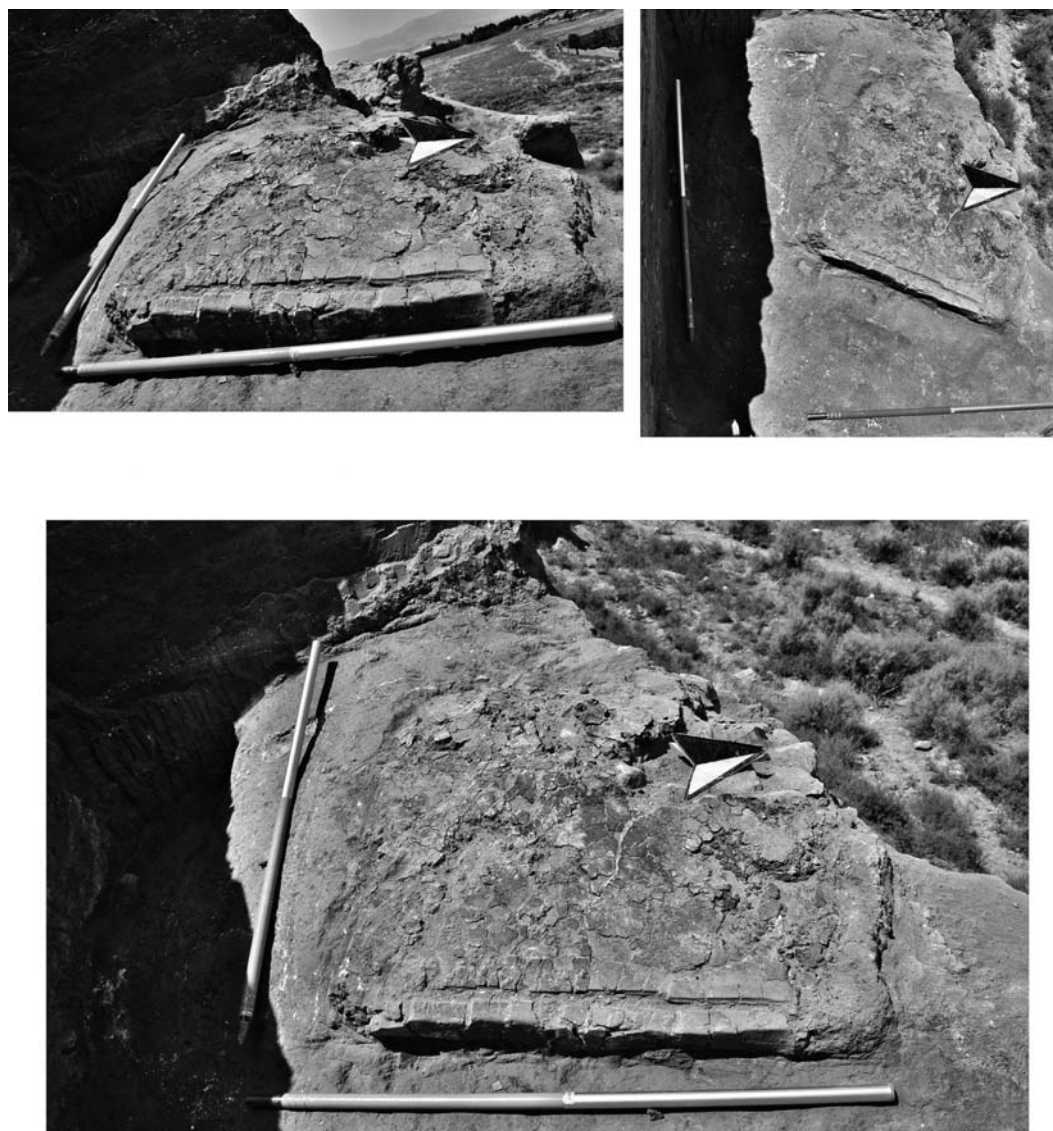
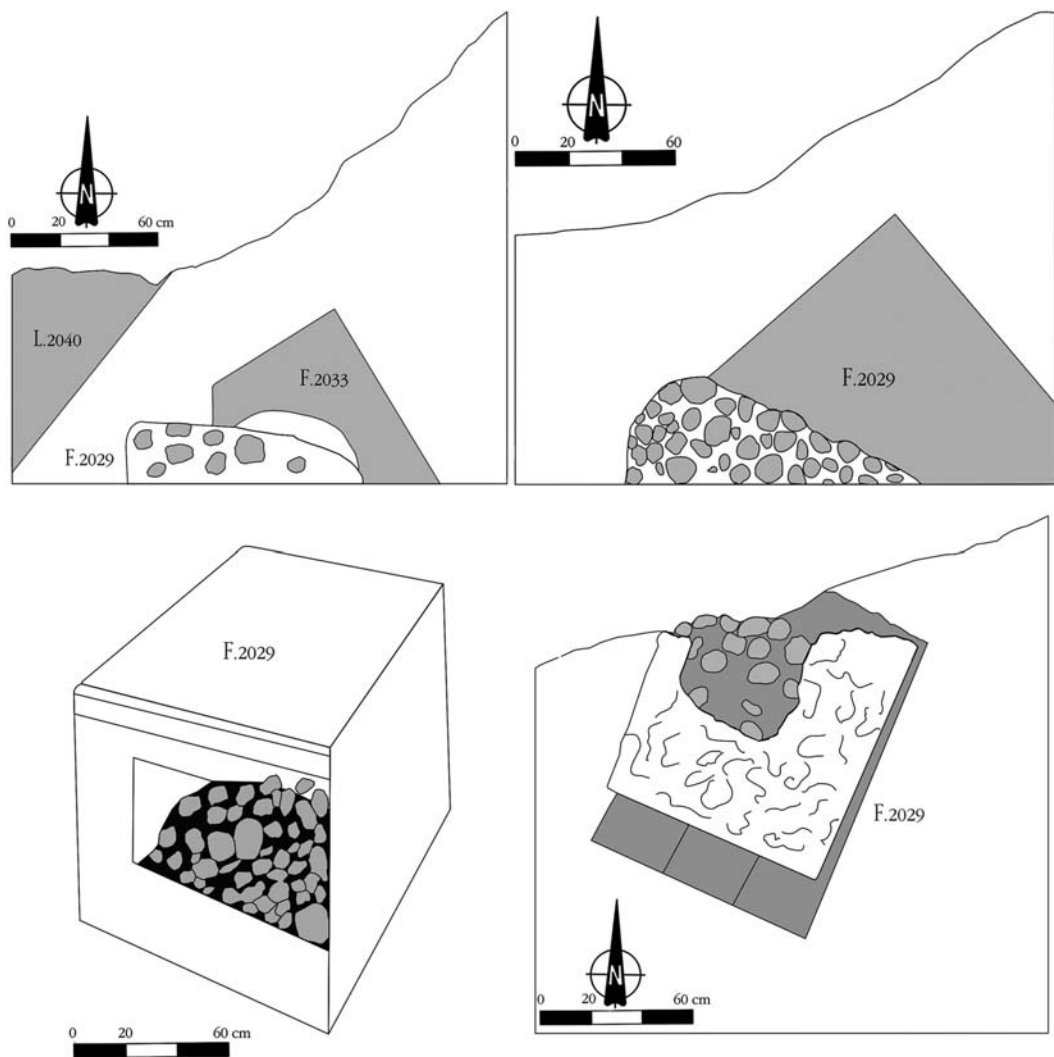


Fig. 37. 1 Kul Tepe IV (F. 2026): rectangular mud-brick structure, Trench II;  
2 Kul Tepe IV (F. 2019-2020): mud-brick structure, Trench II.





Figs 38. Kul Tepe IV (F. 2029, F. 2033): unknown heated complex structure covered with burnt pottery sherds, Trench II.



Figs 39. Kul Tepe IV (F. 2029, F. 2033): unknown heated complex structure covered with burnt pottery sherds, Trench II.





Fig. 40. Kul Tepe IV (F. 2012): complete oven structure, Trench II.

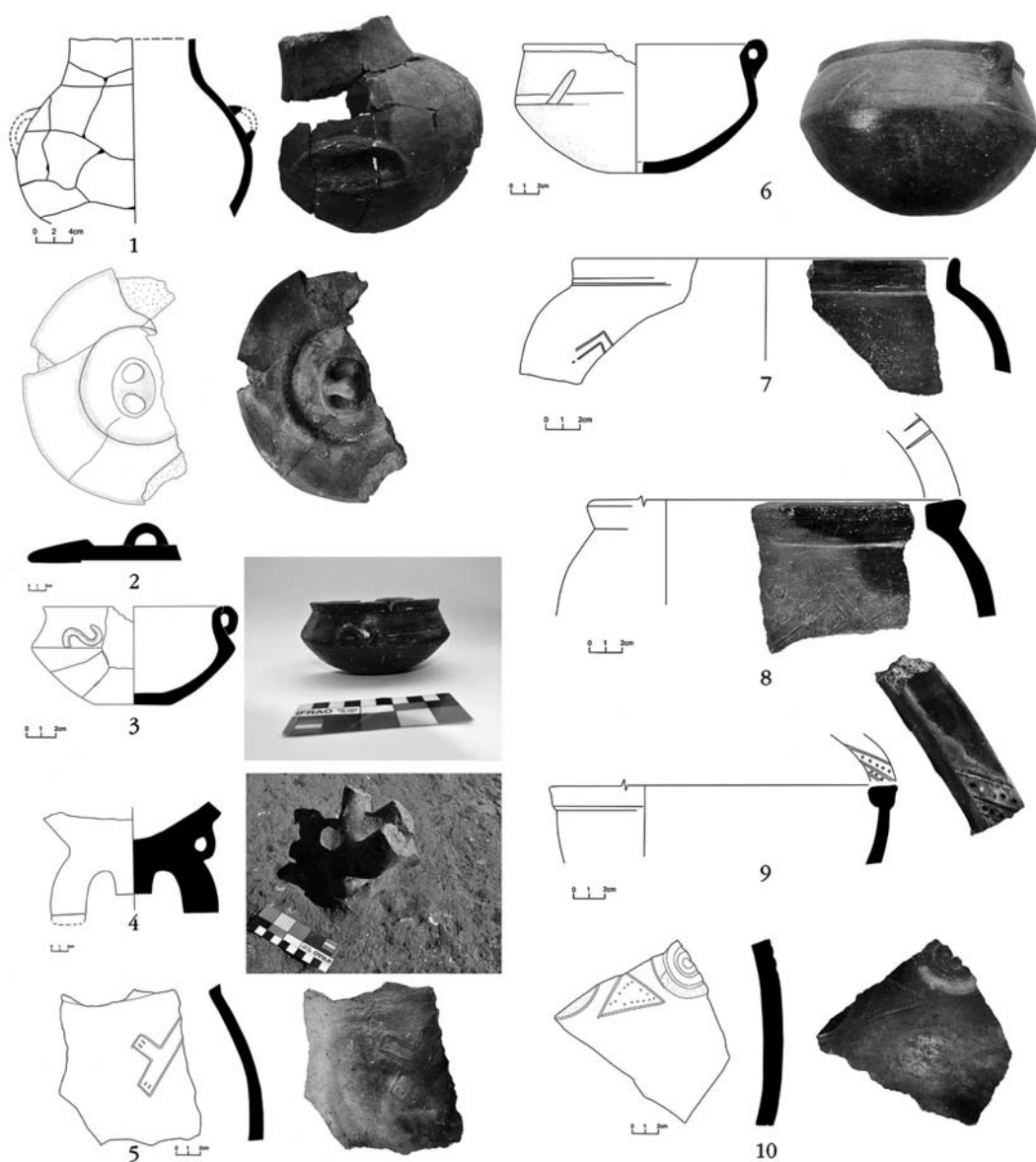


Fig. 41. Kul Tepe IV. Pottery, 1: Locus 2033; 2 Locus 2041; 3 Locus 1048; 4 Locus 2029; 6 Locus 1045; 5, 7–10: Surface Survey (out of context).

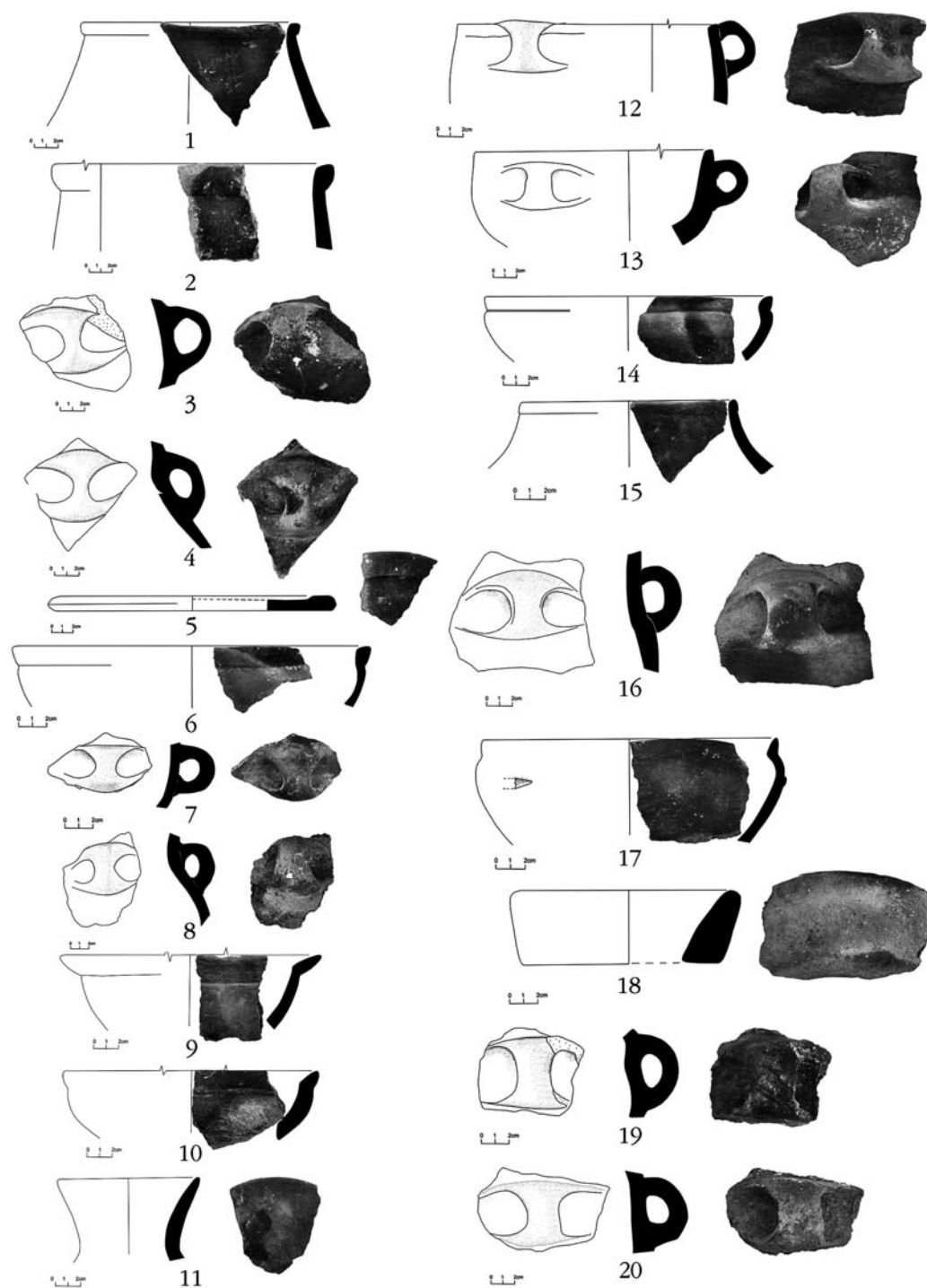


Fig. 42. Kul Tepe IV. Pottery, 1-4: Locus 2041; 5-8 F. 2032; 9-11 Locus 2037; 12-15 Locus 2036; 16: Locus 2033; 17-20: Locus 2031.

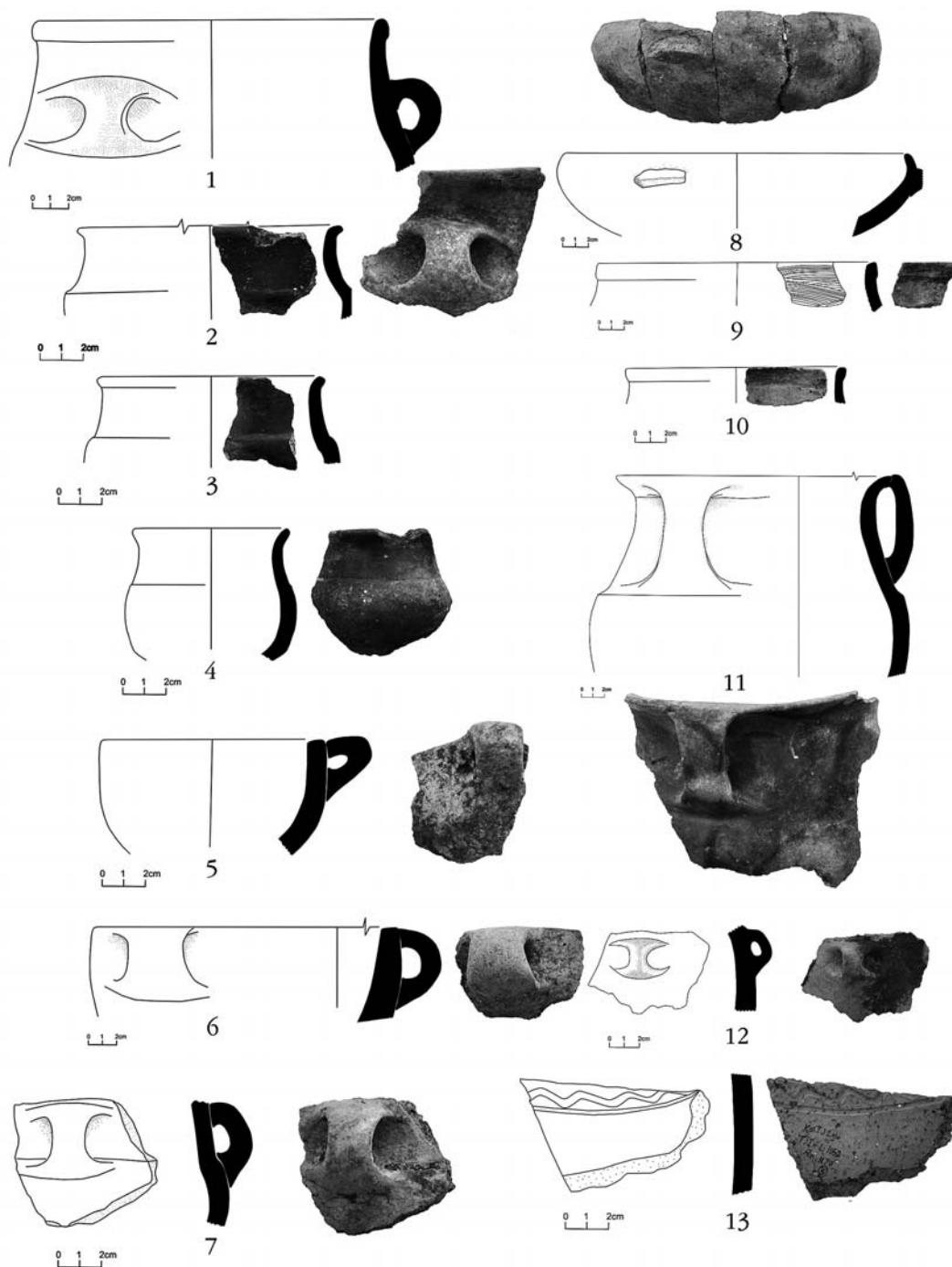


Fig. 43. Kul Tepe IV. Pottery, 1-7: Locus 1058; 8-10: Locus 1057; 11-12: Locus 1053; 13: Locus 1052.

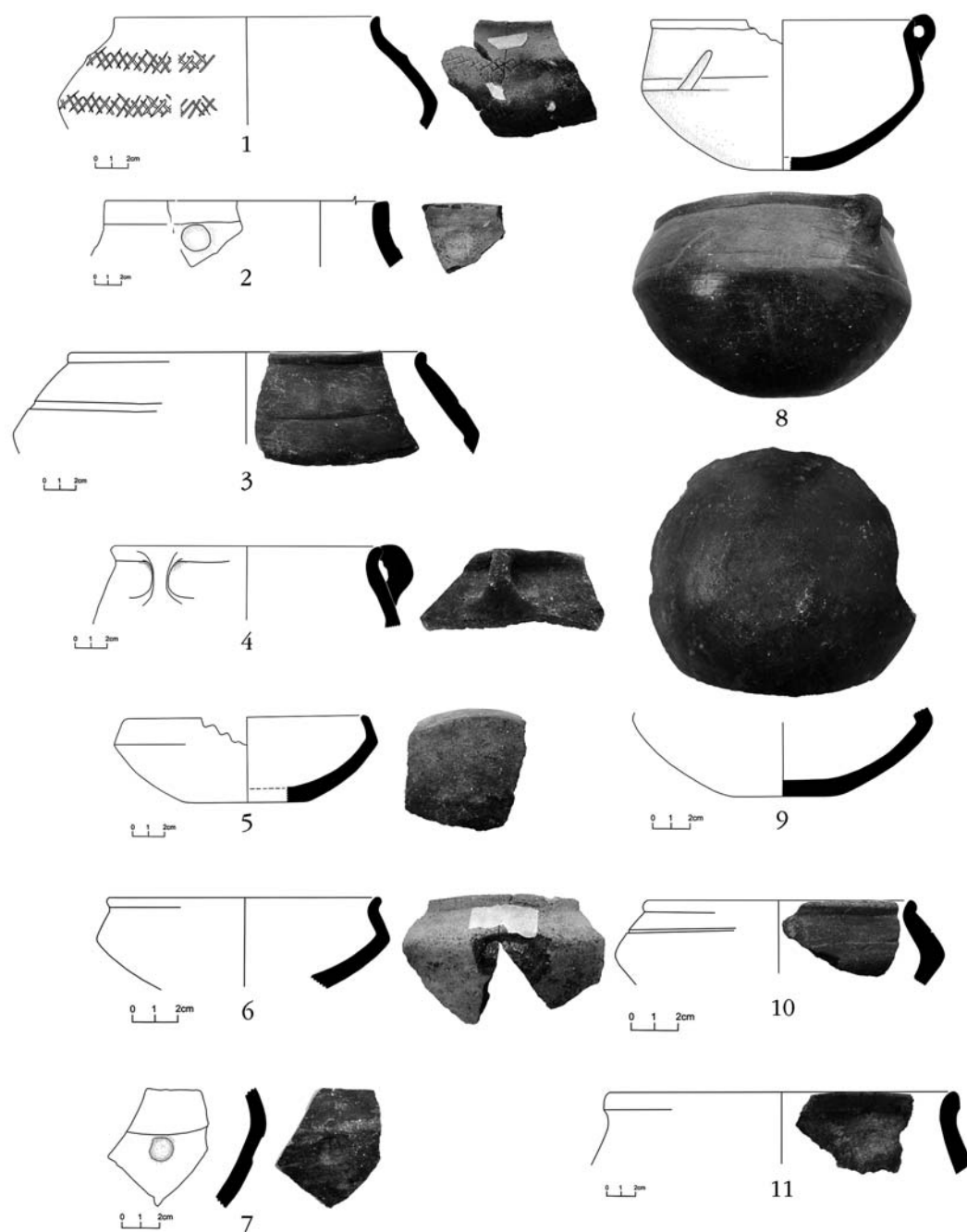


Fig. 44. Kul Tepe IV. Pottery, 1-2: Locus 1050; 3-7: Locus 1048; 8-11: Locus 1045.



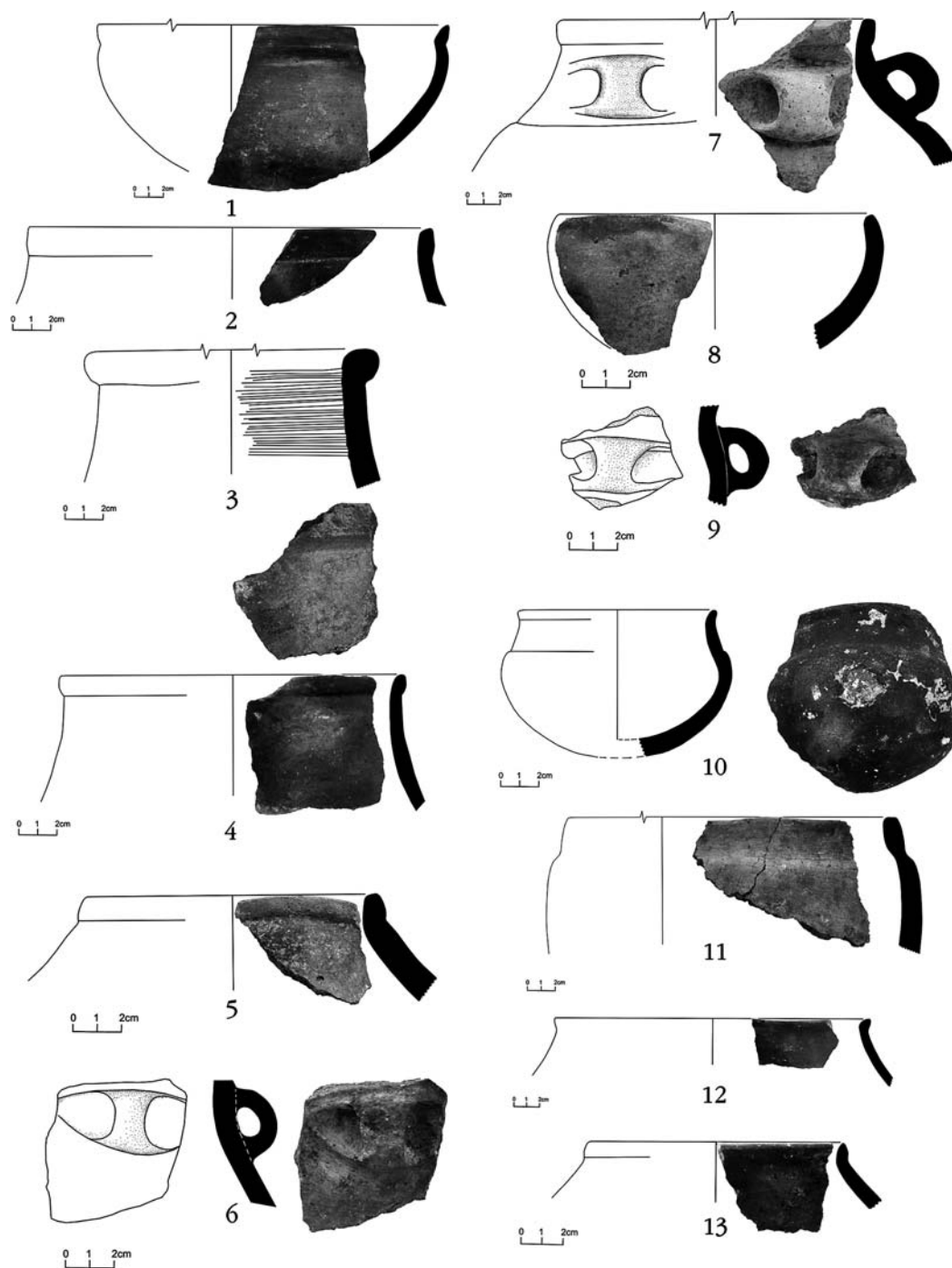


Fig. 45. Kul Tepe IV. Pottery, 1–4: F. 2020; 5–6: Locus 2029; 7–9: Locus 2028; 10–13: Locus 2030.



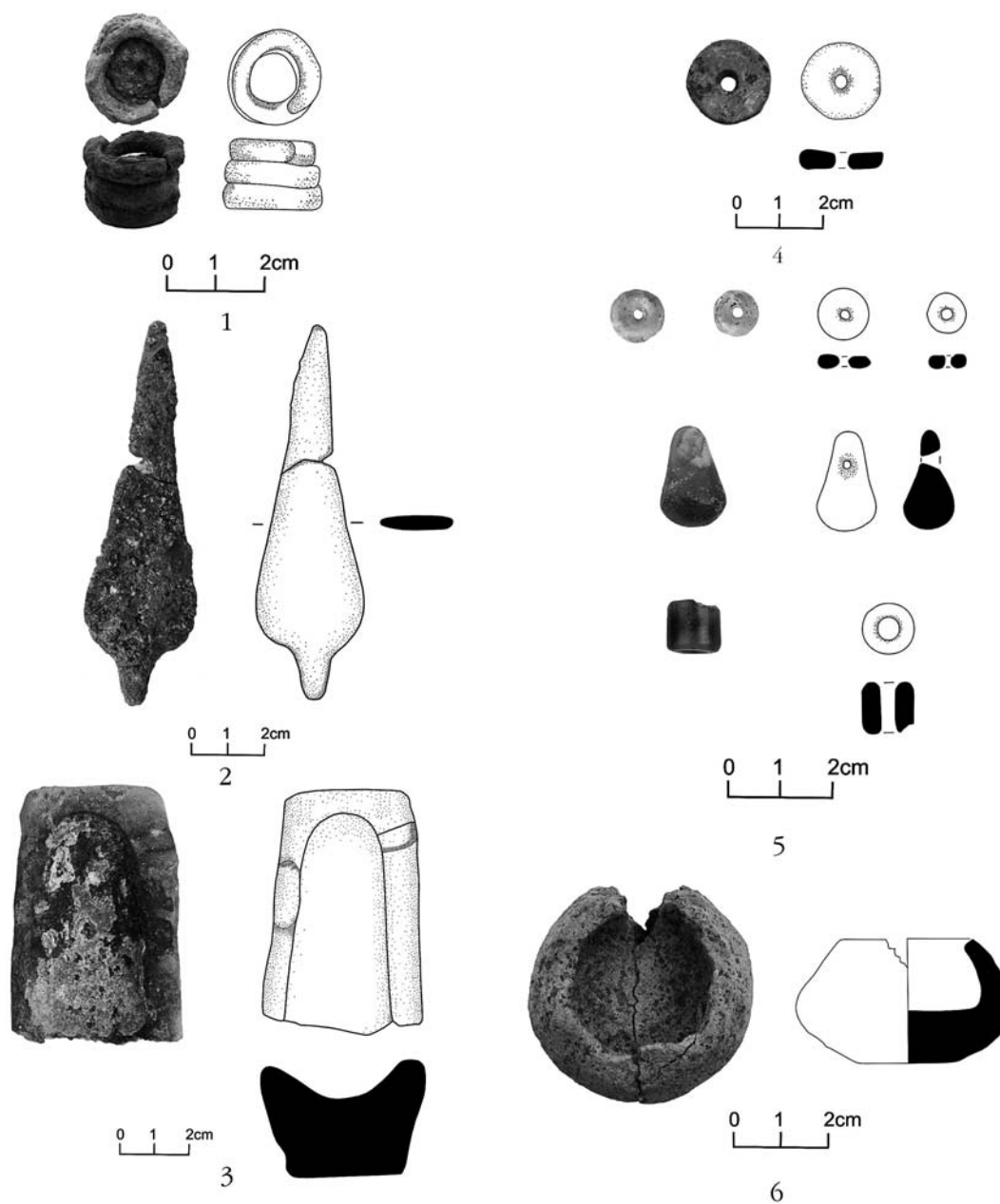


Fig. 46. 1 Kul Tepe IV: Locus 1058: bronze earring, Trench I;  
 2 Kul Tepe IV: Locus 2030: bronze dagger, Trench II; 3 Kul Tepe IV: Locus 1054: metal smelting mould, Trench I;  
 4 Kul Tepe IV: Locus 2033: stone ornamental object, Trench II; 5 Kul Tepe V: Locus 2044: agate beads, Trench II;  
 6 Kul Tepe IV: Locus 2022: miniature clay bowl, Trench II.

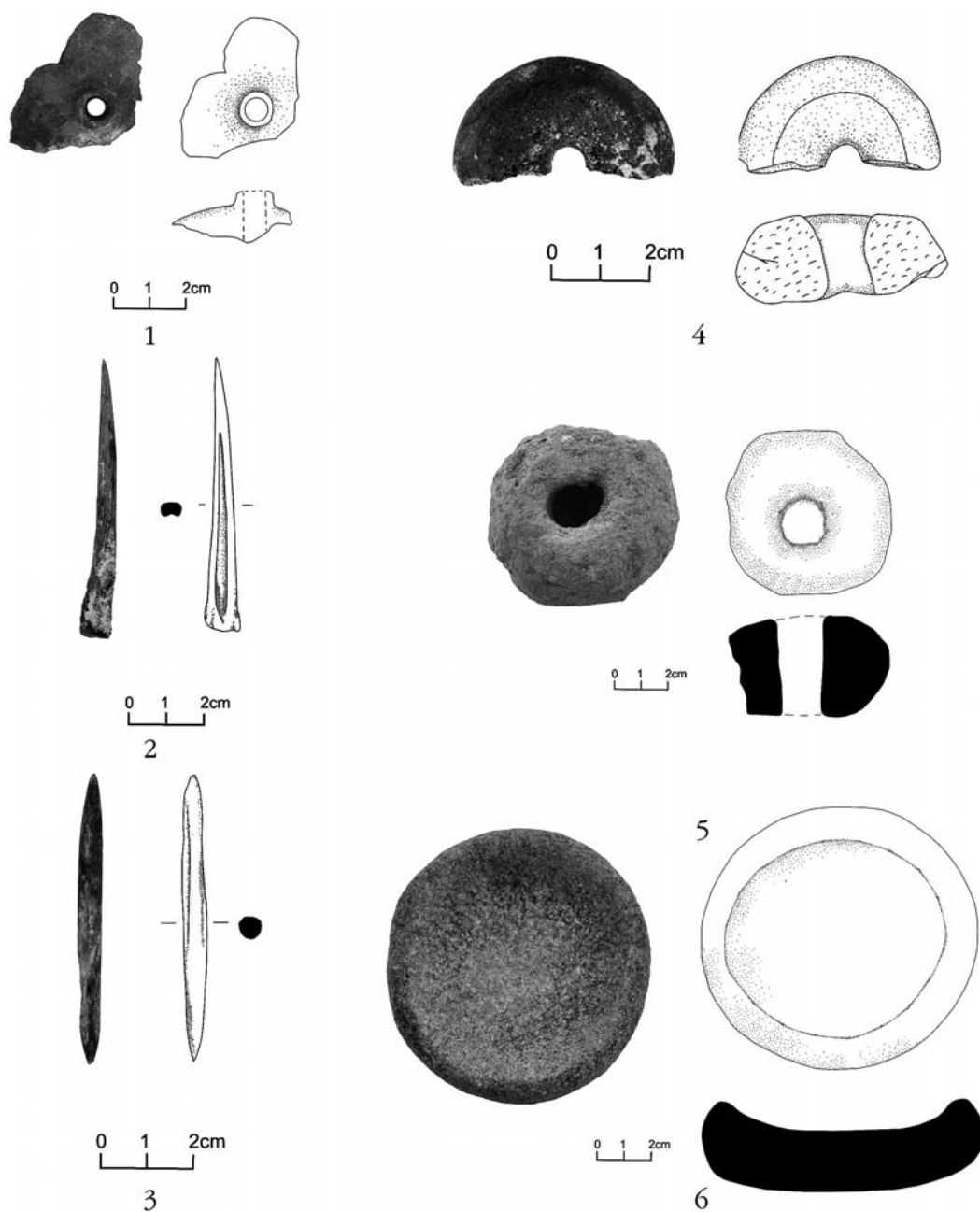


Fig. 47. 1 Locus 2040: clay spindle whorls, Trench II; 2 Locus 2044: bone awl, Trench II;  
 3 Locus 2045: bone awl, Trench II; 4 Locus 2019: stone spindle whorls, Trench II;  
 5 Locus 2010: unbaked clay object, Trench II; 6 Locus 2009: stone bowl.

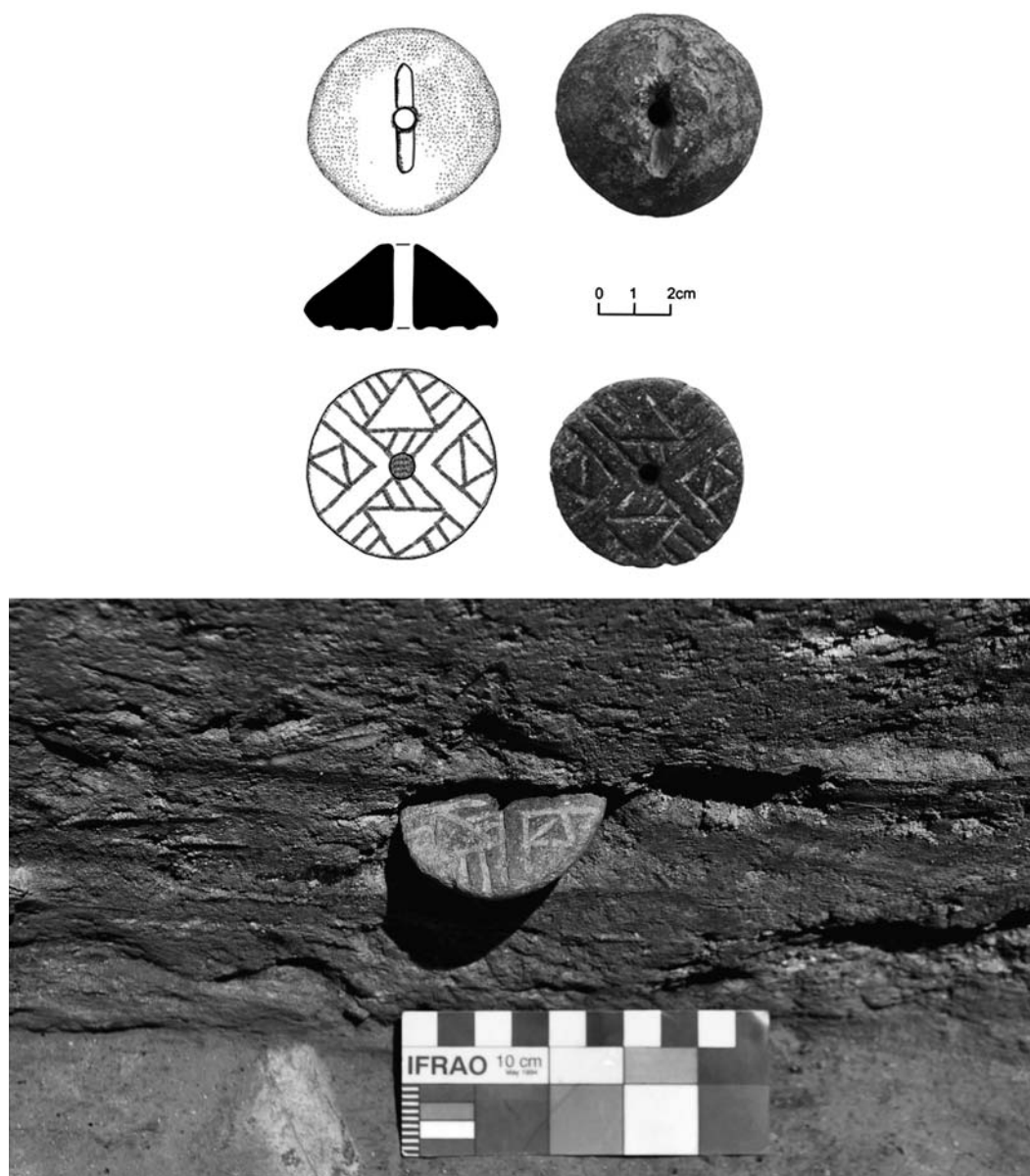


Fig. 48. Kul Tepe IV, Locus 1055: Special possible stamp seal.

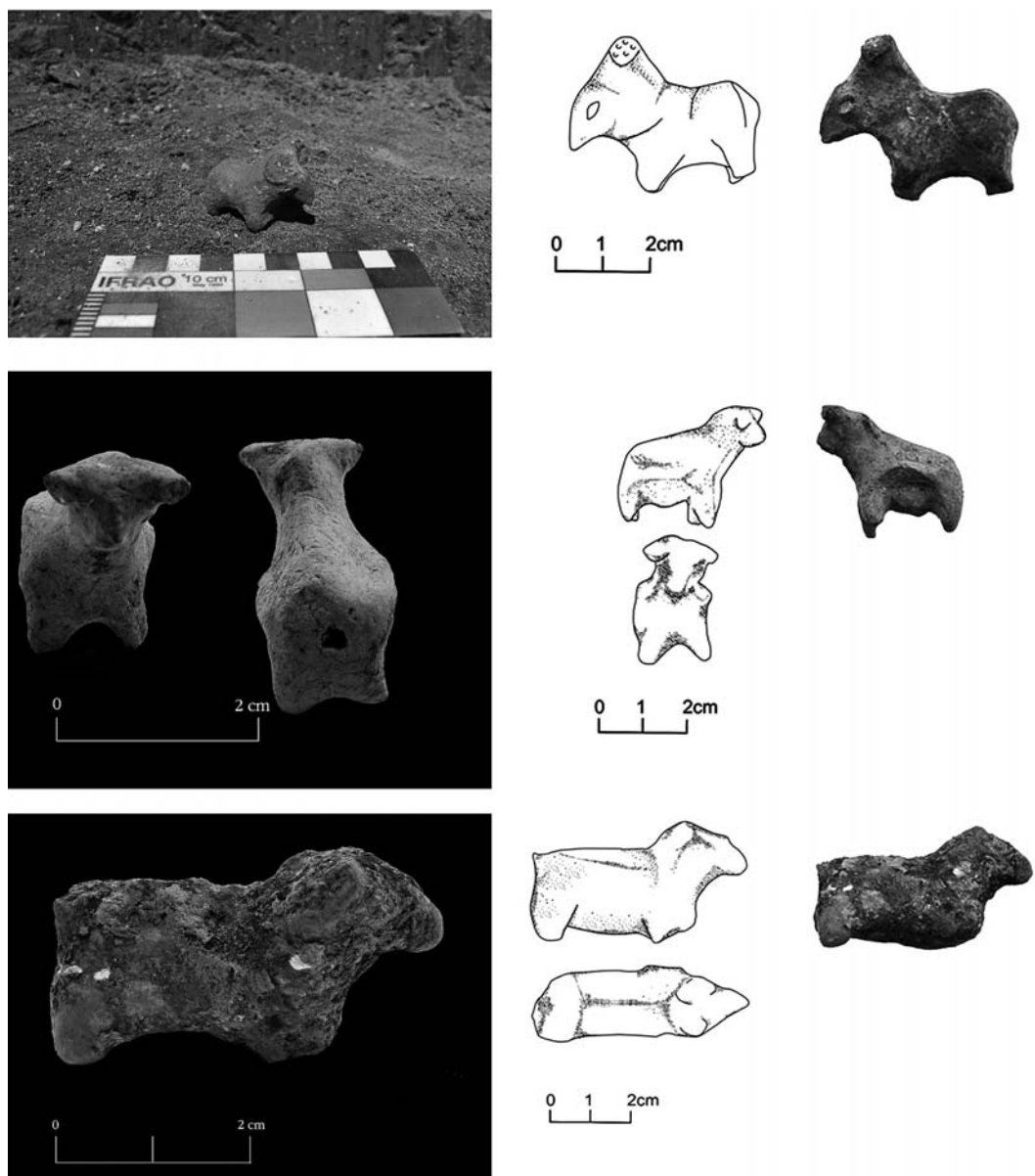


Fig. 49. Kul Tepe IV, typical Early Bronze Age animal figurines.

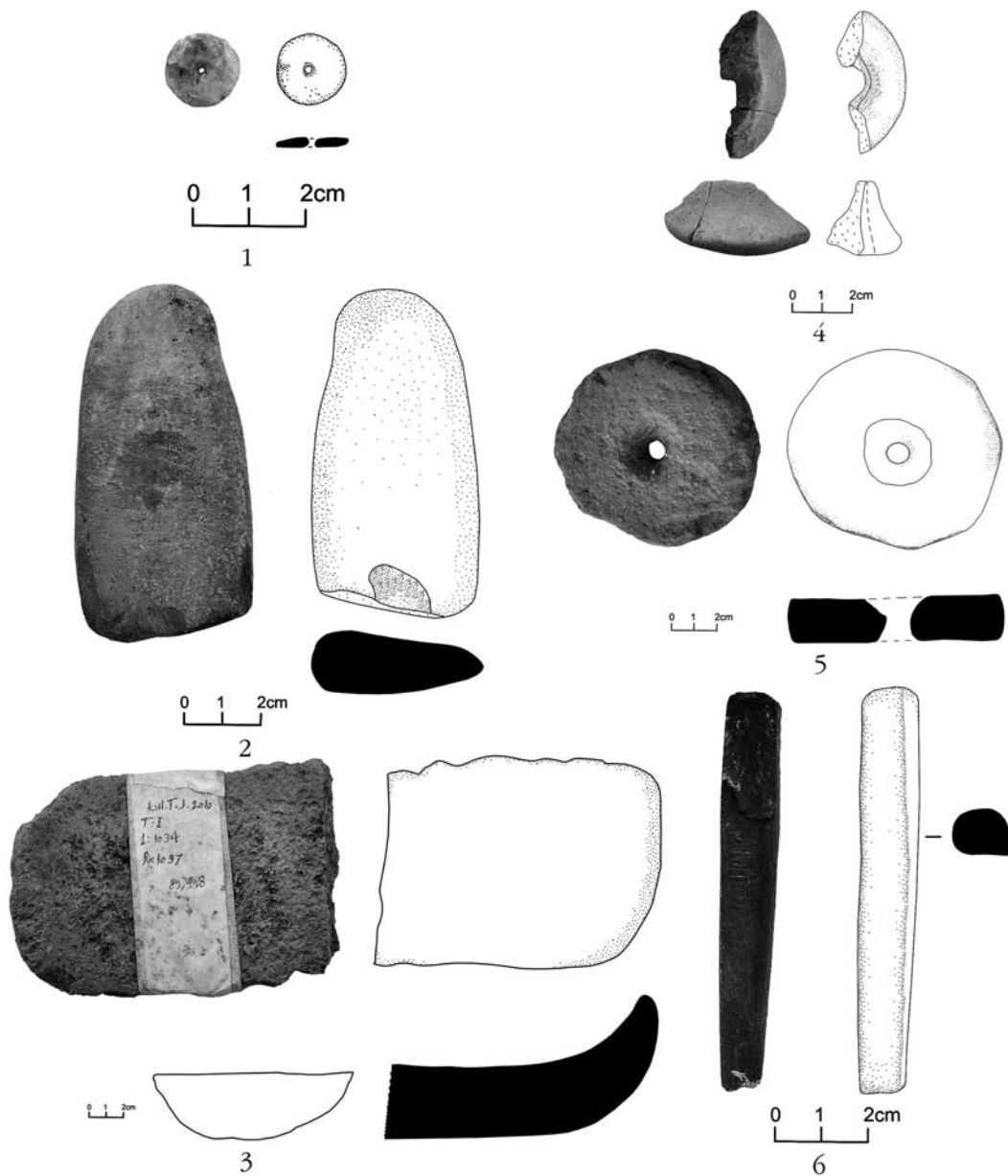


Fig. 50. 1 Locus 1058: stone ornamental object, Trench I; 2 Locus 1055: stone pestle, Trench I; 3 Locus 1034: stone mortar, Trench I; 4 Locus 2001: clay spindle whorls, Trench II; 5 Locus 1009: stone ornamental object, Trench I; 6 Locus 1055: stone object.



Fig. 51. Kul Tepe III, 1, 7–8: surface survey sample; 2–6: Locus 1036; 9: Locus 2010; 10–13: Locus 2022.



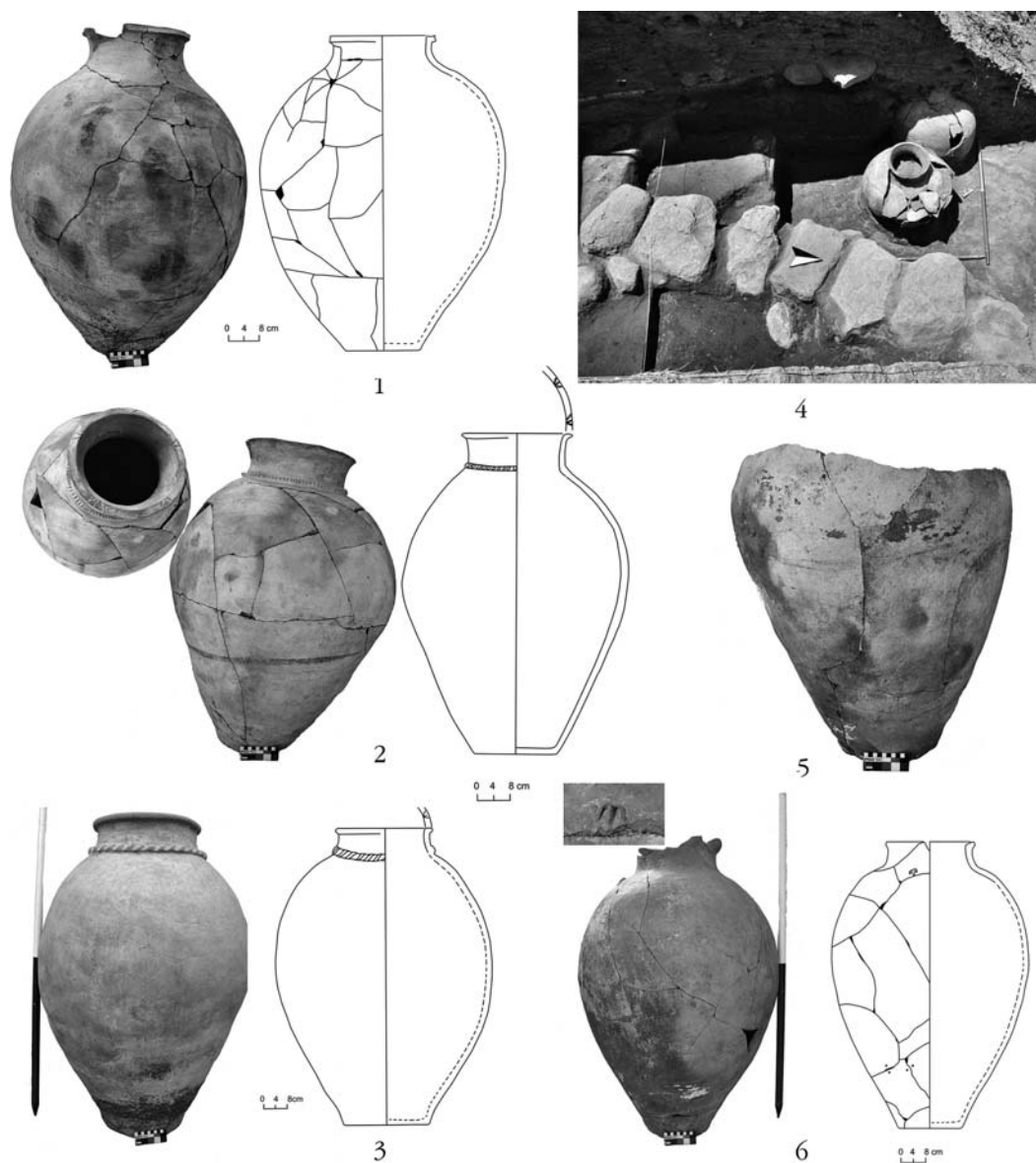


Fig. 52. Kul Tepe II: large storage jars.

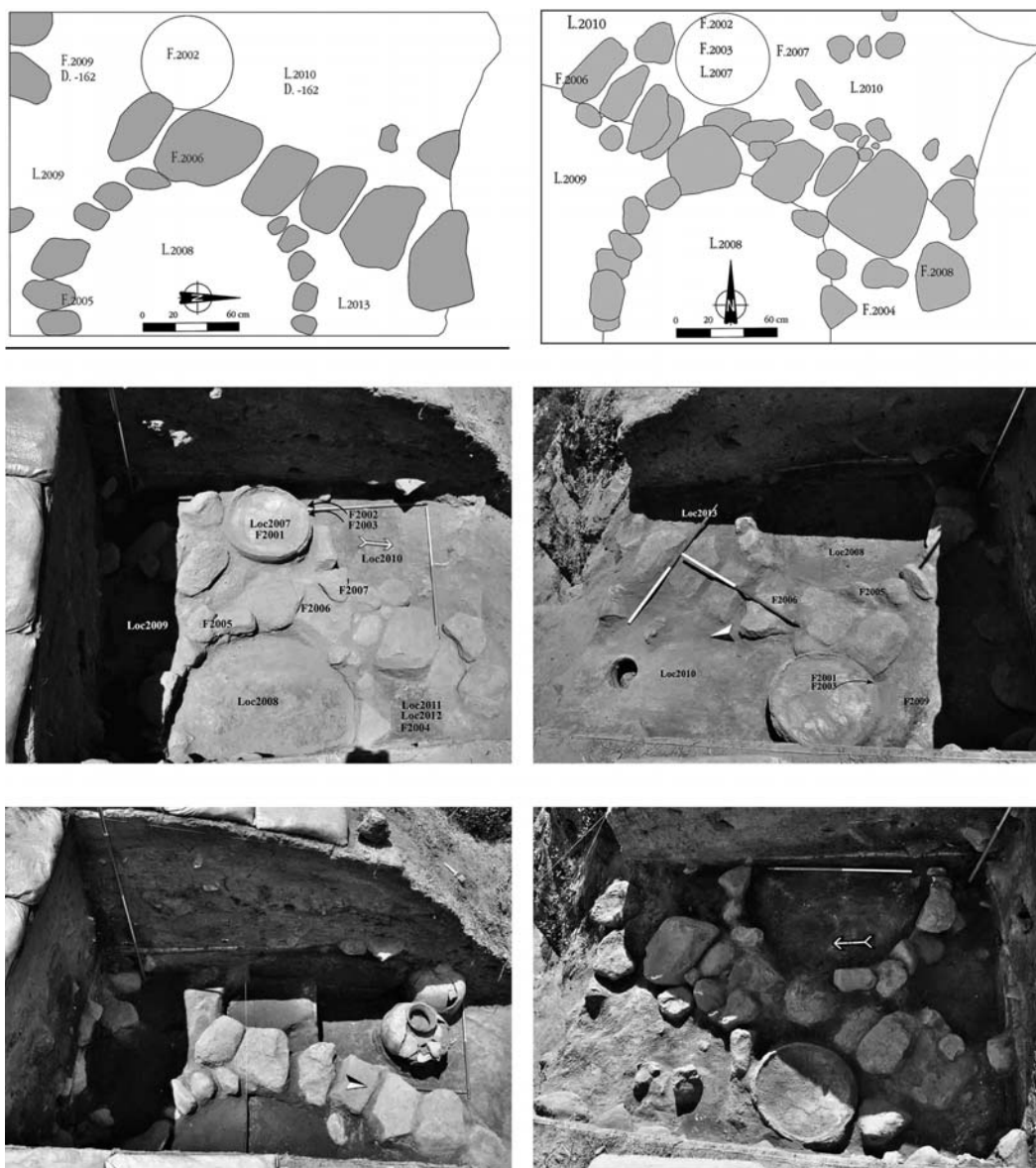


Fig. 53. Kul Tepe II: F. 2002–2009, circular stone-built structure.

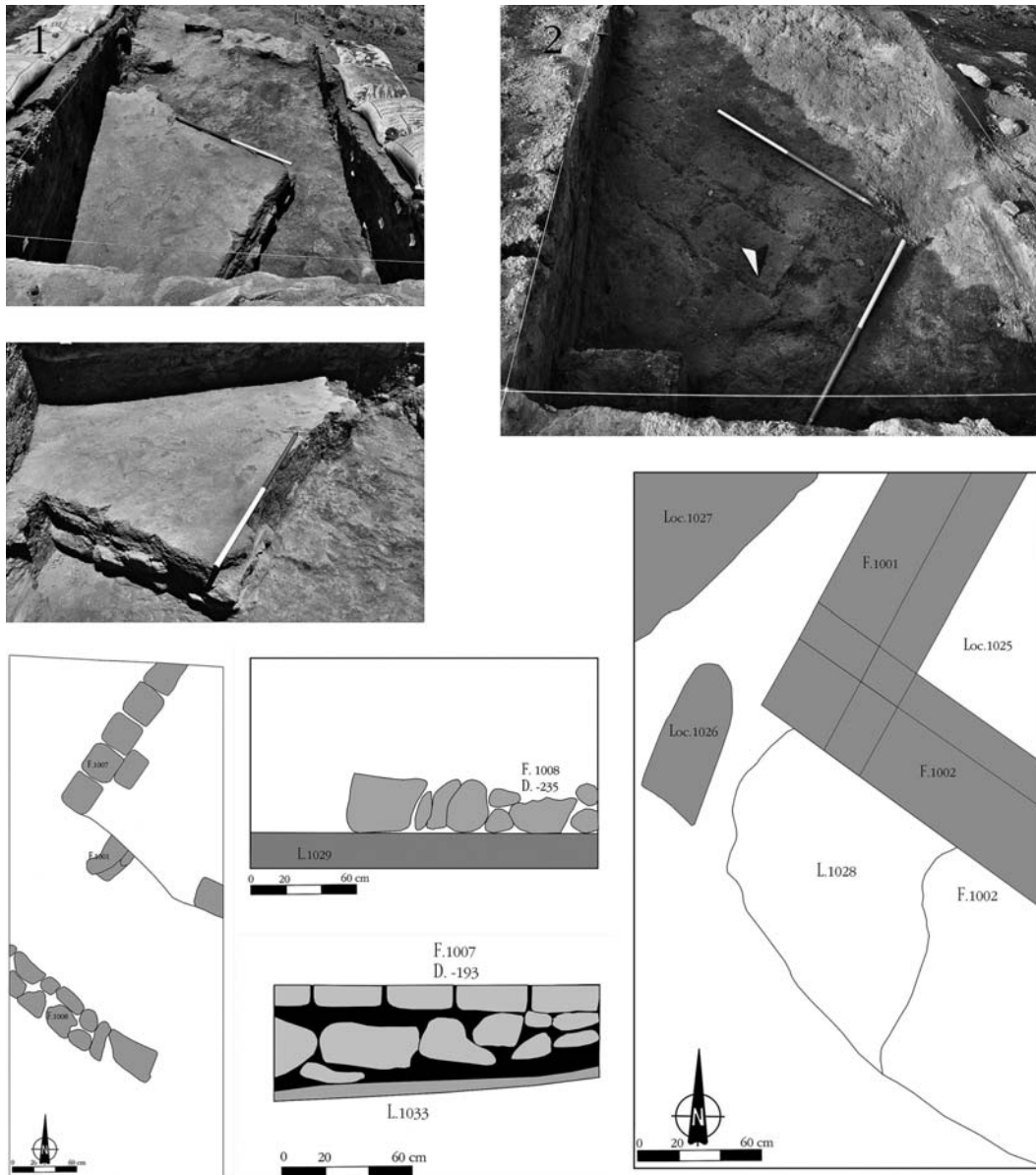


Fig. 54. Kul Tepe II: 1 F. 1001-1002; 2 F. 1007-1008, rectangular mud-brick structure with stone foundation.

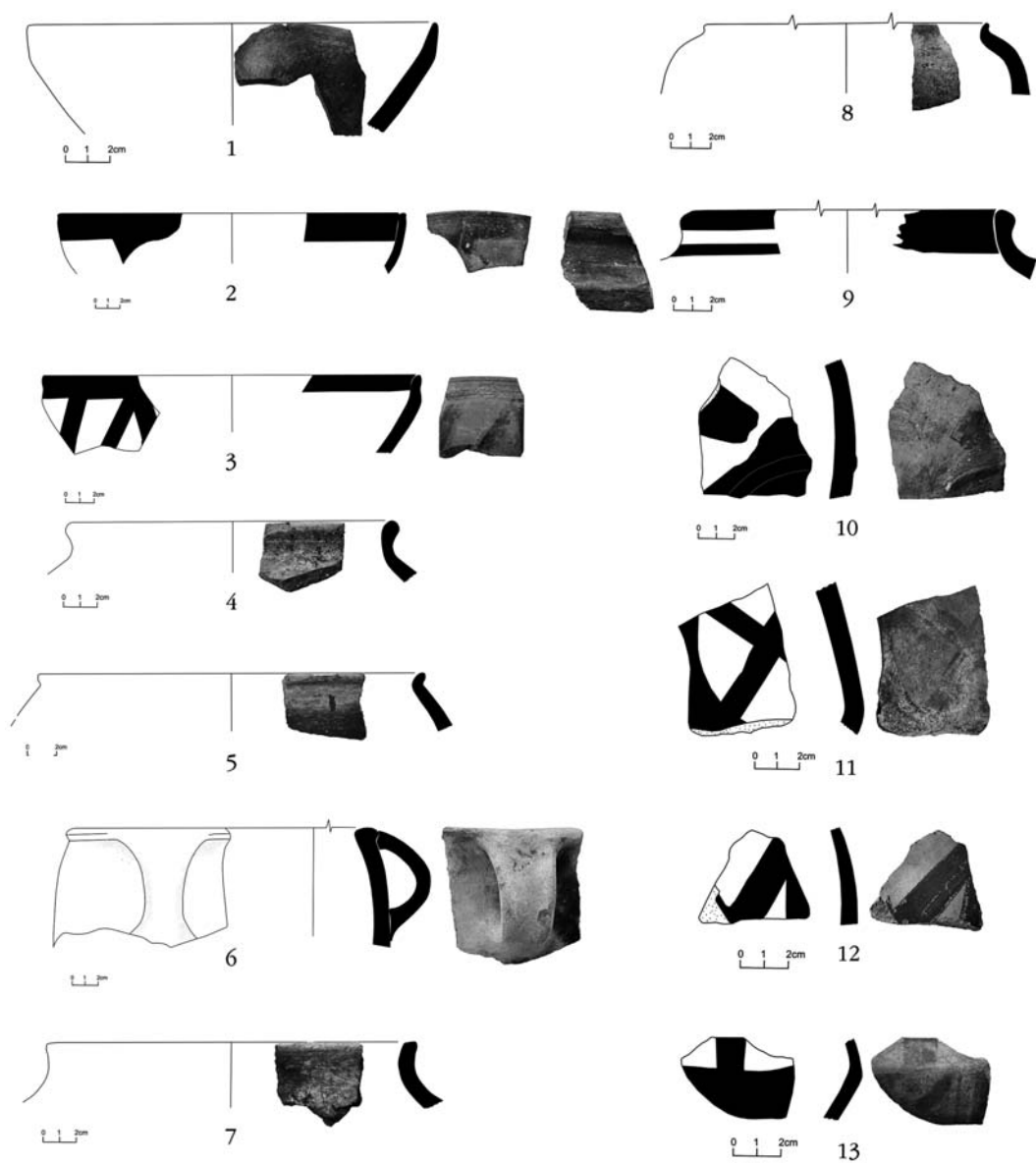


Fig. 55. Kul Tepe II. Pottery, 1-5: Locus 1034; 6-7: Locus 1033; 8-13: Locus 1032.

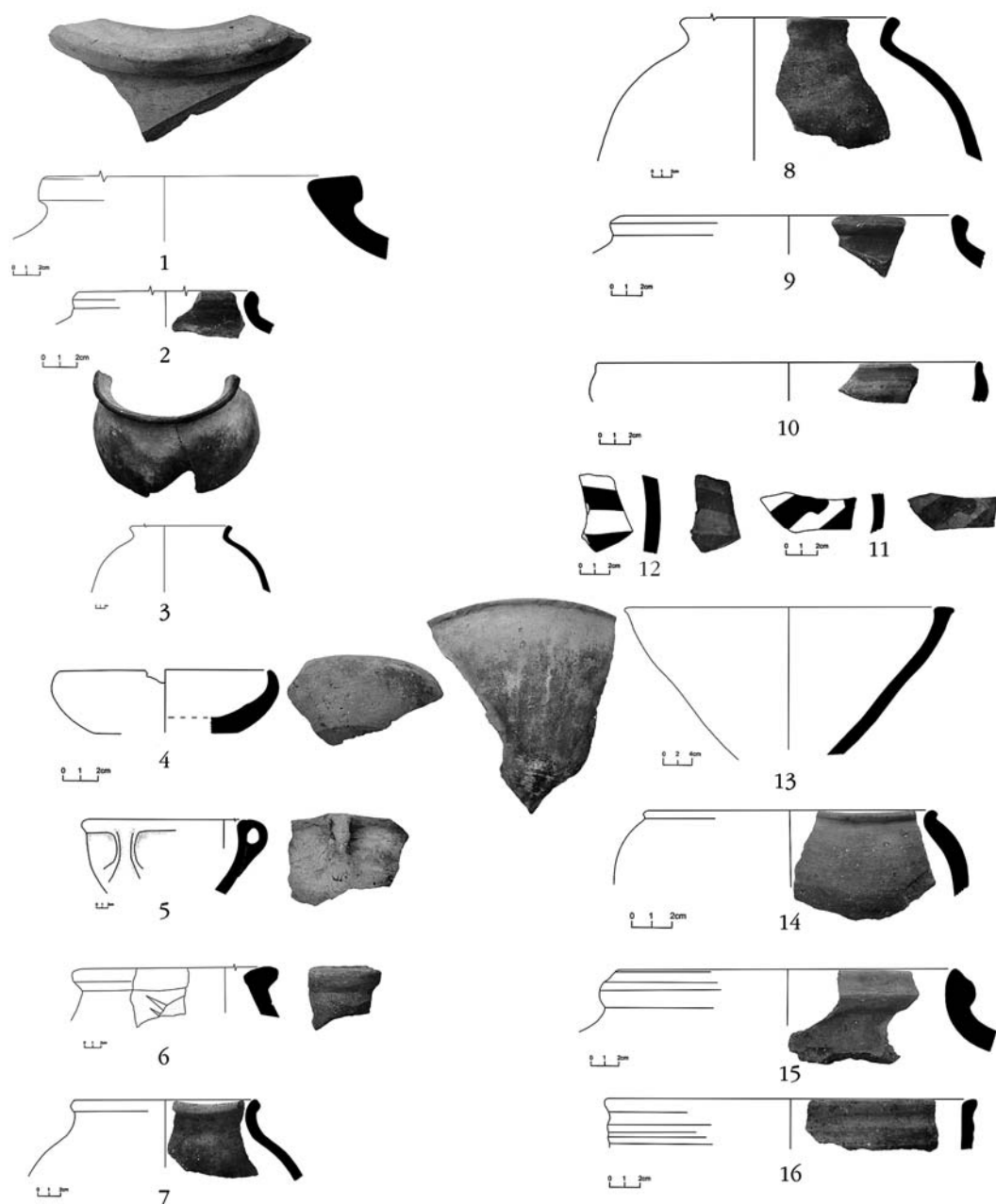


Fig. 56. Kul Tepe II. Pottery, 1-2: Locus 1031; 3-12: Locus 1029; 13-16: Locus 1024.





Fig. 57. Kul Tepe II. Pottery, 1-6: Locus 1012; 7-8: Locus 1009; 9-16: Locus 2010.



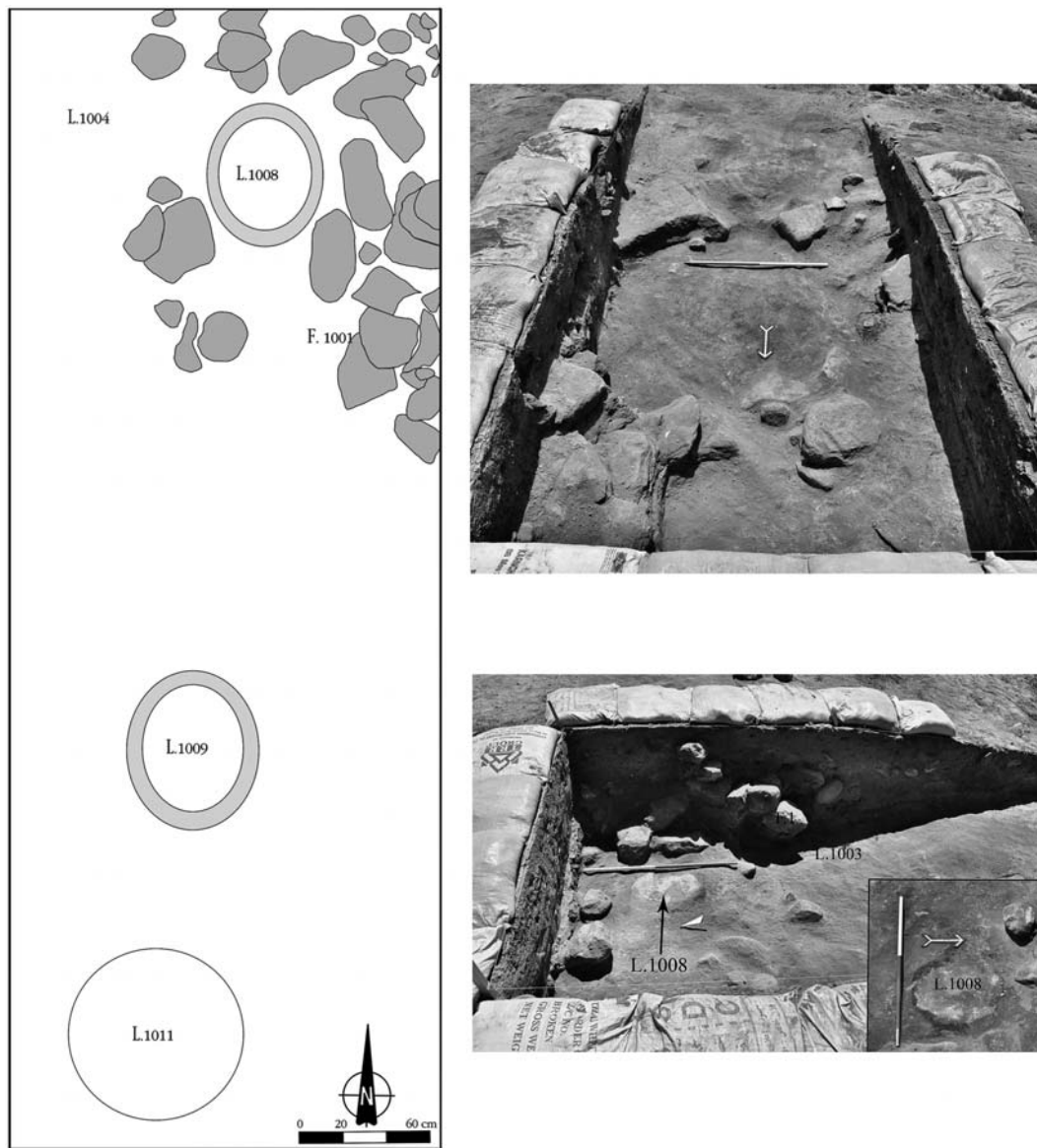


Fig. 58. Kul Tepe I: F. 1001, stone-built structure, Trench I.

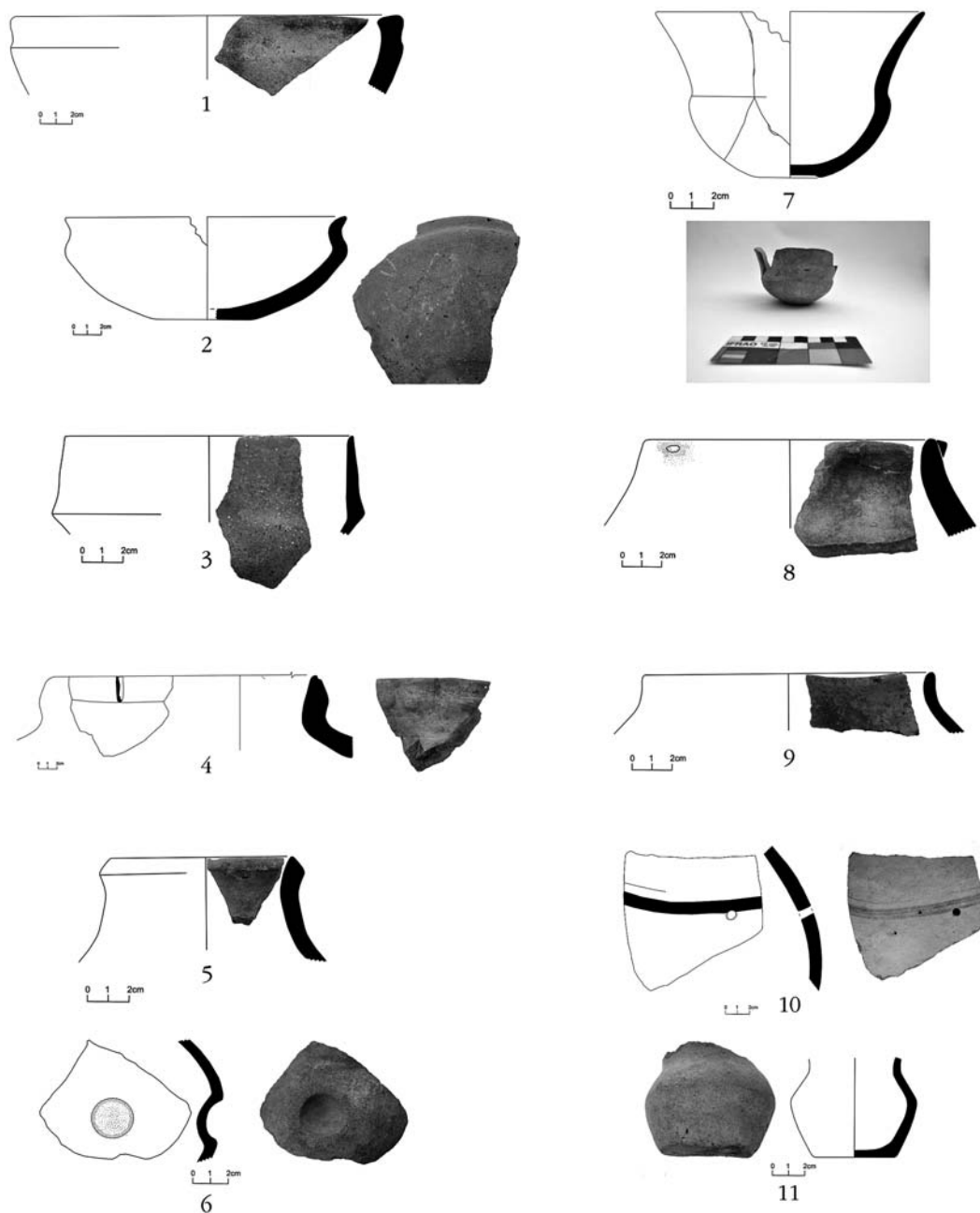


Fig. 59. Kul Tepe I. Pottery, 1-5: Locus 1003; 6, 8-11; Locus 2001; 7: Locus 1029.

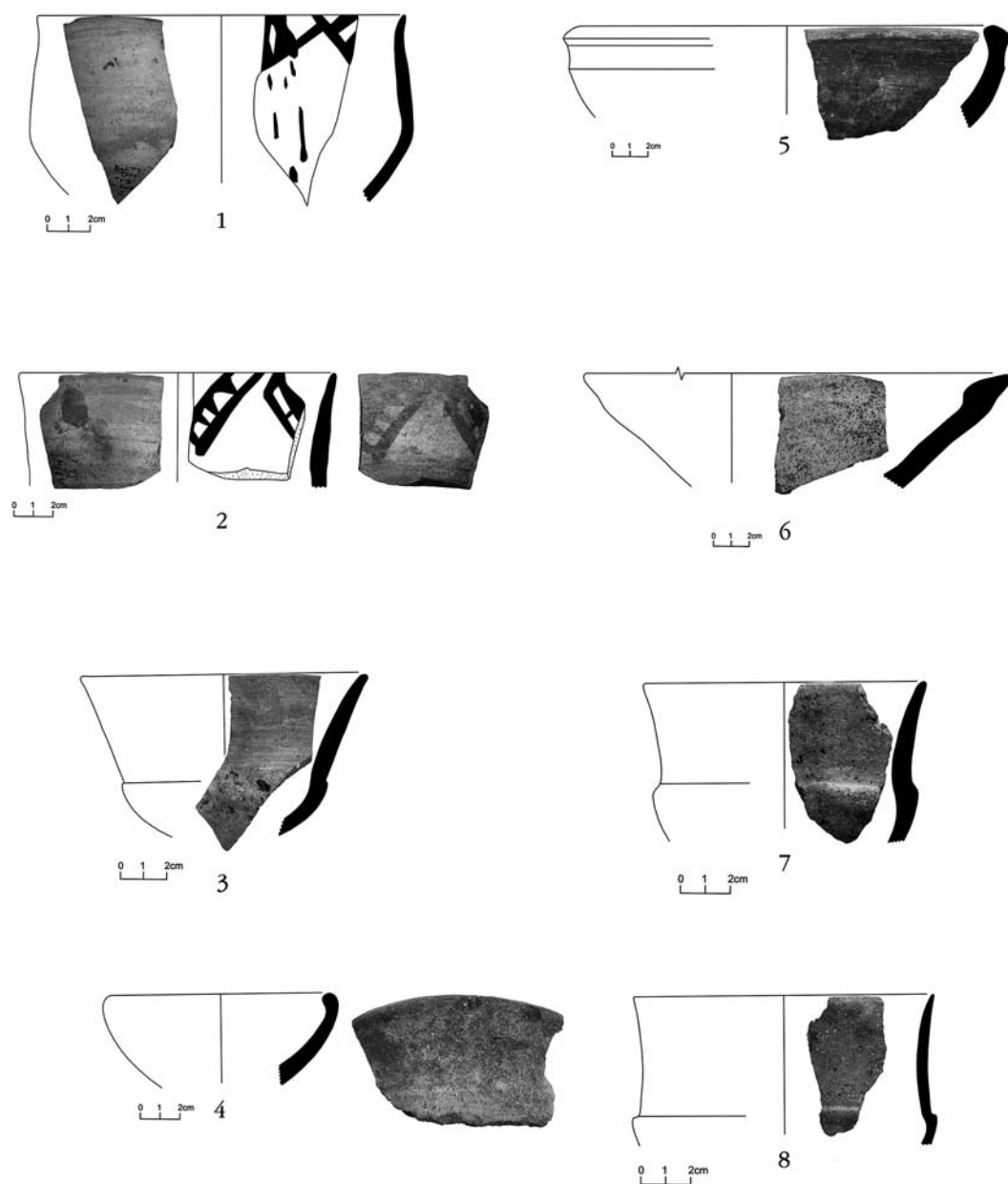


Fig. 60. Kul Tepe I. Pottery, 1-4: Locus 2002; 5-8; Locus 1001.

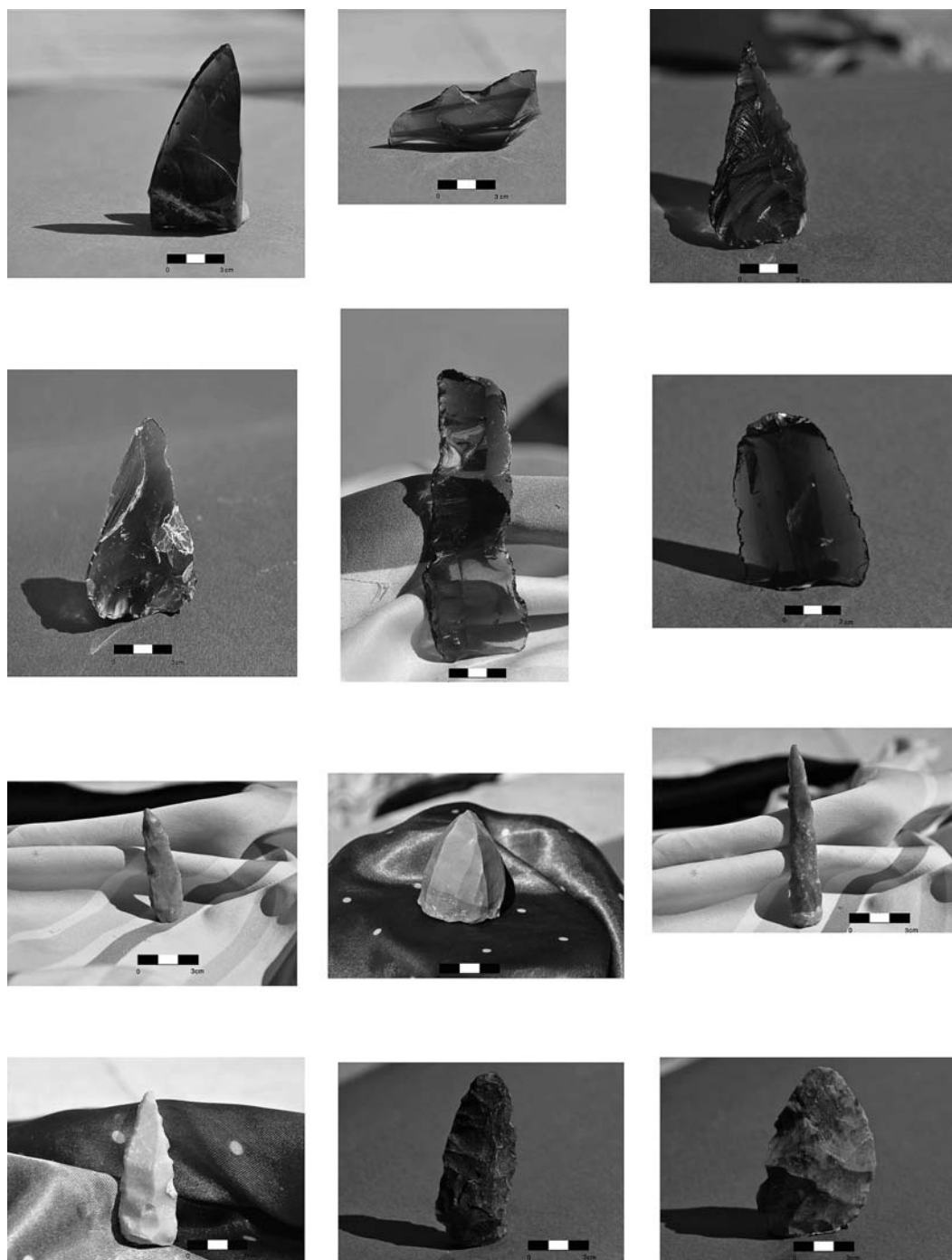


Fig. 62. Lithic artefacts (points, notched, blade and flake) of Kul Tepe made from Obsidian, chert and quartz.

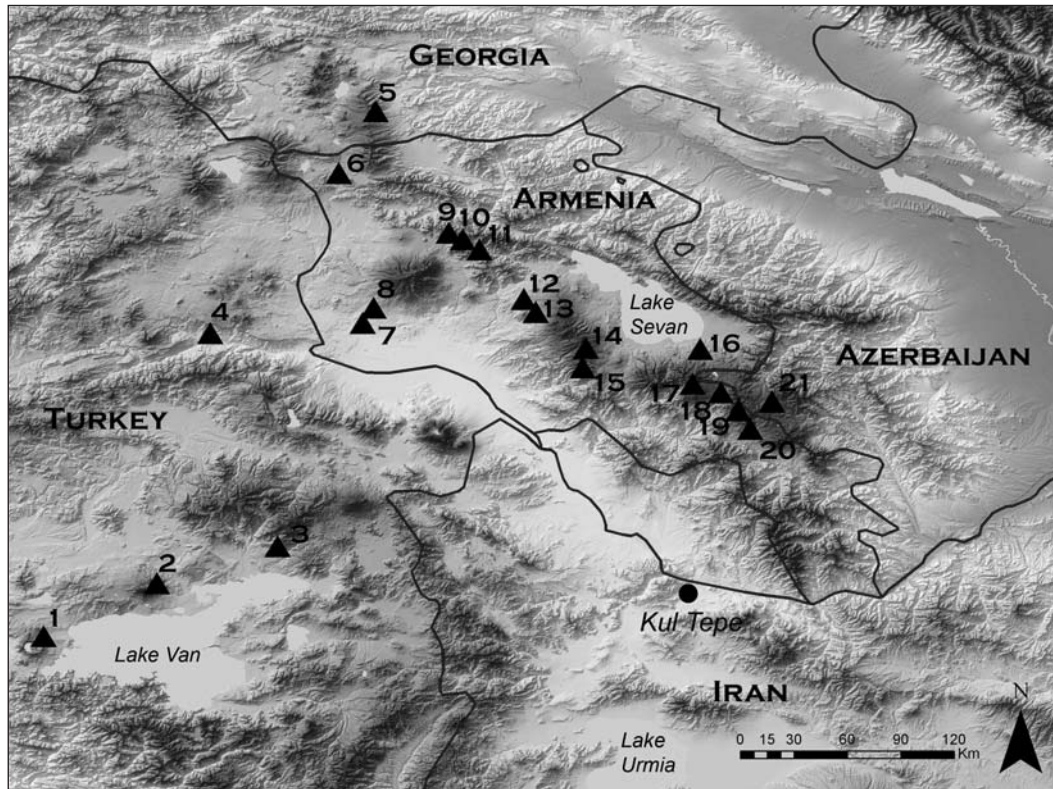


Fig. 64. Map showing the locations of Kul Tepe and obsidian sources from the Near East characterized by the Archaeometry Lab at MURR. Source names are as follows: (1) Nemrut Dag; (2) Suphan Dag; (3) Meydan Tepe; (4) Sarikamis; (5) Chikiani; (6) Ashotsk; (7) Pokr Arteni; (8) Metz Arteni; (9) Damlık-Hankavan; (10) Tsaghkunyats; (11) Kamakar; (12) Gutansar; (13) Hatis; (14) Geghasar; (15) Spitaksar; (16) Vardenis; (17) Choraphor; (18) Satanakar; (19) Syunik; (20) Bazenk; and (21) Kelbadzhar.





Fig. 66. Flotation system constructed at Kul Tepe.



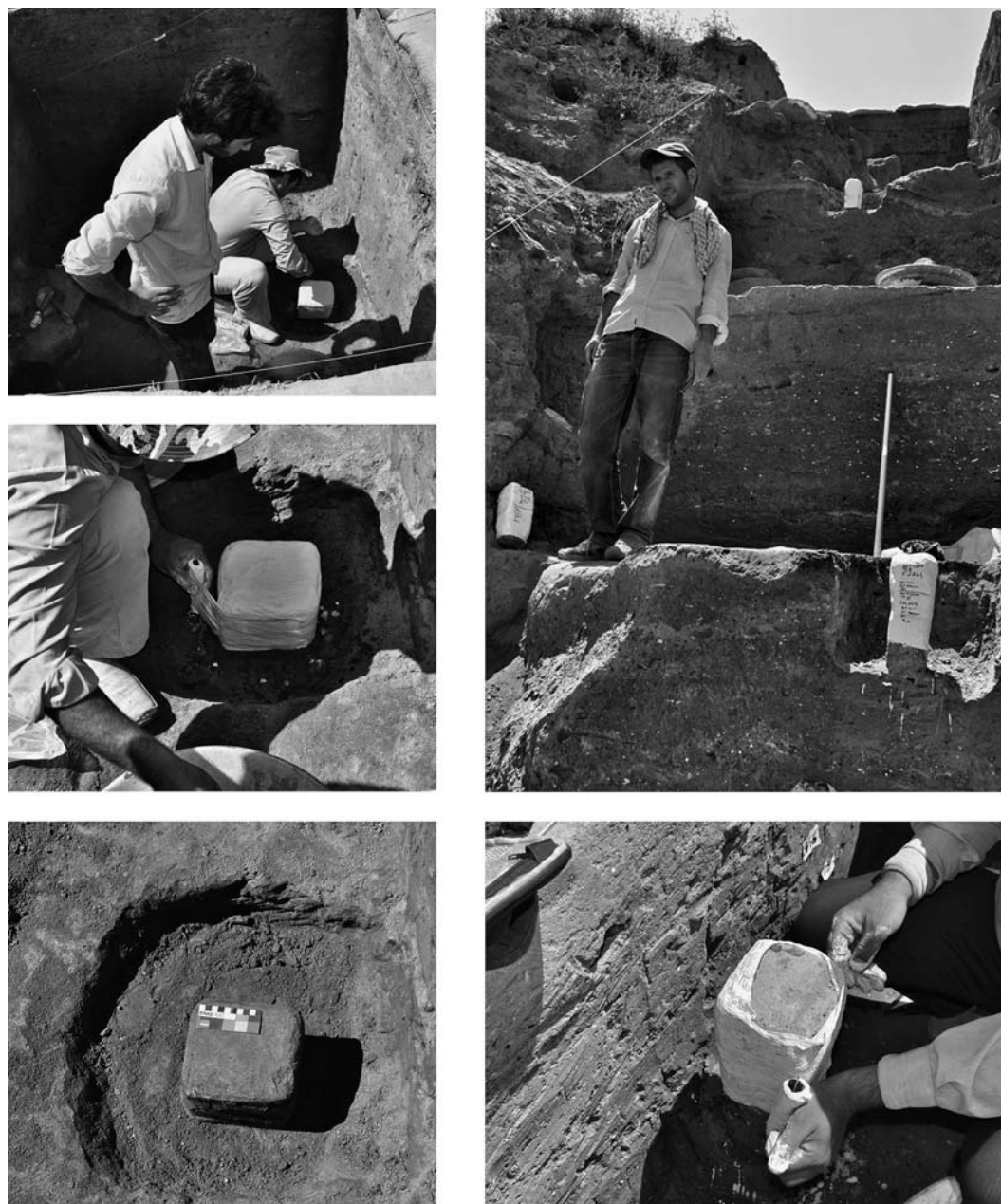


Fig. 67. Micromorphology sampling at Kul Tepe.

# The Khersan 3 Archaeological Survey: New Insights into Settlement Patterns in the Zagros Folding Zone from Hydro-Dam Project Archaeology

Parsa GHASEMI and Greg WATSON

## Abstract

*In the first decade of the twenty-first century, Iran witnessed a steady increase in the number of professional archaeological surveys undertaken. A high number of these were triggered by the need for salvage investigations of regions identified as suitable for hydroelectric dam reservoirs. The most significant example of this hydropower-driven rescue archaeology is the unprecedented international effort, since 2004, that has gone into the Bolaghi Gorge, Fars Province, slated to be the reservoir of the Sivand Dam. However, numerous other hydropower projects continue to be developed across Iran, and for each of them there is a statutory requirement that an archaeological survey be conducted before the project is commissioned. These hydro-dam surveys are beginning to constitute a significant body of data on the record of the human presence in upland and marginal areas across Iran, although many of them remain unpublished. These areas have not previously received much attention from professional archaeologists. Cross-analysis of the data in future may yield interesting new insights into Iran's record of human settlement. This paper makes a start by presenting data acquired in the course of a professional rescue investigation of one of these reservoir sites: the proposed Khersān 3 Dam in the highlands of Chahārmahāl-o Bakhtiāri and Kohgilūye-o Būyer-Ahmad, southwestern Iran. The authors also suggest one way in which the archaeological record in the Southern Zagros folding zone might be interpreted.\**

## Introduction

This paper presents the results of the Khersān 3 Salvage Archaeological Survey of an area of the Southern Zagros Mountains folding zone in southwestern Iran. It describes the region and the most significant sites and surface finds. The authors also suggest ways in which this data will assist future scholarship to gain better insights into as yet poorly understood human settlement patterns in the highland Southern Zagros Mountains folding zone.

\* The authors would like to mention a number of people who assisted in the compilation and completion of this report. They are Dr Mohammad Mortazāi, the former director of the Iranian Center for Archaeological Research (ICAR); Dr Abbās Alizādeh for dating the prehistoric pottery; the engineers of the Khersān 3 Hydro-electricity Project, Messrs Jafari Zadeh, Karimi, Salimi-Niyā, Mīr Eghbali for their sincere cooperation; good friends Mr Kourosh Roustāi, Ahmad Āzādi, Alirezā Khosrozādeh and Feridoun Biglari, Ebrahim Ghezelbāsh, and Javad Jafari who generously read the text of the paper and made helpful suggestions, and lastly, the honourable members of the committee who encouraged the completion of this survey. Our sincere thanks.

By nature, surveys can be unsatisfactory, in that the data collected may be fragmentary, impressionistic and occasionally tantalising. They should seldom be the basis for making strong claims to having significantly advanced archaeological understanding of a site or region. Surveys create an agenda for further work, little more, and the ambitions of this report are commensurably modest. We employ Abbās Alizadeh's theory of "enclosing vertical mobile pastoralism" as a framework to draw meaning from some of the survey's tentative findings.<sup>1</sup> Alizadeh's groundbreaking work has begun to provide Iranian archaeologists with significant insights into dynamics which may help explain settlement patterns found in the archaeological record, not to mention the evolution of early states in southwestern Iran.

Broadly, the Southern Zagros folding zone's socio-economic context was until recently one of tribal "dimorphic" societies, characterised by seasonal nomadic, or "mobile pastoralist", migrations existing in a fully integrated symbiosis with some settled arable agricultural elements. The nomads here have traditionally been politically dominant, a pattern of relations termed "enclosing," in contrast with a number of other systems elsewhere, in which the settlements were dominant – a pattern termed "enclosed".<sup>2</sup> Alizadeh argues that this system, once developed by the end of the fifth millennium BCE, proved remarkably resilient, albeit with cycles of sedentarisation followed by periods of *relative* "desettlement" and reversion to a more mobile pastoralist way of life.<sup>3</sup> The archaeological record of these hypothesised iterative sedentarisation-desettlement oscillations and their possible causes has not yet been documented in the Southern Zagros folding zone, but it may provide at least one aspect of a research agenda for future excavations guided by the results of this and other recent hydro-dam surveys.

The archaeological survey of the Khersān 3 Dam reservoir area was conducted under the supervision of Pārsā Ghāsemi (first author of this paper) for the Iranian Center for Archaeological Research (ICAR) between October and December 2008. Among the main aims of this survey were to identify archaeological sites within the area of the proposed reservoir of the dam, to draw up archaeological maps of the area, and to record precise data from the sites to facilitate future research that may include test trenches, soundings and possibly more comprehensive excavations.<sup>4</sup>

## Overview

The Khersān 3 Dam will be built in an exceptionally mountainous area, in the shadow of the western face of Mount Denā, the fourth highest peak in Iran. The rugged region marks the boundary between Chahārmahāl-o Bakhtiārī and Kohgīlūye-o Būyer-Ahmad provinces. It is

<sup>1</sup> See Alizadeh 1387/2008a; 2010.

<sup>2</sup> Alizadeh 2010, p. 354. Abdi (2003, p. 395) describes pastoralism in the Central Zagros as "an adaptive strategy to a highland environment with limited and dispersed resources in order to supplement a primarily agricultural village-based economy. With expansion of the agricultural regime, the distance to be traveled to pastures by herders became greater, and as a consequence, the organization of labor involved in herding had to be modified to meet the more complex task of moving sizable herds over larger areas."

<sup>3</sup> Alizadeh 1387/2008a, p. 371.

<sup>4</sup> Although an archaeological survey before a dam is filled is a legal obligation, and these surveys are designed to identify significant sites that should be excavated, reasonable seasons of follow-up excavations are occasionally a luxury not afforded to Iranian archaeologists after the initial intensive survey. Fortunately, Ghasemi was able to return to the area in Spring 2013 with funding and a team to excavate the Shush village site, which appears to have relatively deep archaeological deposits. Four other teams are currently excavating other sites identified by the survey within the Khersan 3 reservoir area.

the catchment for important rivers, among them the Kārun, Zāyandeh Rud and the Khersān. Its relatively high annual rainfall sustains these permanent rivers, not to mention numerous springs, quite dense oak-dominated woodland and productive upland pastures and meadows. The reservoir area can be roughly divided into two portions: southeast and northwest. The eastern upstream half is close to Mount Denā and possesses more open valleys with earth hills than the downstream western half of the reservoir. It also has a relatively cooler climate. The western half has a greater number of springs, thicker woodland cover and narrower, steep “V”-shaped valleys, with less level ground along the river banks. The feature that makes it one of the more geomorphologically unusual and distinctive regions of the Zagros Mountain Ranges is the complete absence of even small alluvial plains.

The extent of the area surveyed in October to December 2008 by Ghasemi’s team was about 80 km<sup>2</sup>, in a strip roughly 40km long by 2 km wide. The outcome was the identification and study of 29 archaeological sites. A season of excavations followed in spring 2013 and identified one further significant site. The most ancient site identified was dated to the Middle and Late Susiana periods (late sixth millennia BCE), and the most recent was dated to the later Islamic centuries (officially ending in 1924).

### The Current State of our Knowledge

The region is located between two important long-standing cultural zones — lowland Khuzestān and highland Fārs. This makes it important for archaeology, especially the archaeology of nomadism, or more accurately, “mobile pastoralism”.<sup>5</sup> Despite this, and the fact that the “lowlands of south-western Iran are [archaeologically] the best studied region of Iran,”<sup>6</sup> these highland areas have remained quite neglected by archaeologists until the last decade. These valleys were the cradle, and perhaps redoubt, of the culture out of which emerged the long-lasting and powerful Elamite state.<sup>7</sup>

From the decade of the 1340s/1960s up to the present, a limited amount of research has been undertaken in Chahārmahāl-o Bakhtiārī and Kohgilūye-o Būyer-Ahmad. The most important projects were the survey and excavations conducted by Zagarell and Nissen,<sup>8</sup> the surveys of Whitcomb,<sup>9</sup> and in recent years, the still largely unpublished and yet to be translated surveys and excavations conducted under the auspices of ICAR by Iranian scholars. This research has given us a relative degree of understanding of prehistoric and historic cultural developments and patterns in the historically more densely settled parts of the Zagros region. The remoter parts of the region have remained largely archaeologically unknown.

The only study that had previously been done in the area of the planned Khersān 3 Hydroelectric Dam reservoir was the rescue excavation of the cemetery at Lamā, for which there is a revised date, based on a single successful sigma 2 bone fragment dating, of 1625–1492 BC.<sup>10</sup> The excavation also

<sup>5</sup> Alizadeh 2010, p. 353.

<sup>6</sup> Moghaddam 2012, p. 512.

<sup>7</sup> Alizadeh 2010, p. 375.

<sup>8</sup> Zagarell 1387/2008; Nissen 1972; and Nissen and Zagarell 1975.

<sup>9</sup> For example, Whitcomb 1991.

<sup>10</sup> Roustāei and Āzādi 2011, p. 200 n. 5; Sołtysiak 2013.

recovered a pottery assemblage with a range of Kaftari-Qaleh/Shogha Teimuran wares (Late Bronze to Early Iron Ages). The Khersān 3 survey has identified other sites which increase the potential significance of the Lamā cemetery. These will be discussed further on.

As the above shows, our understanding of *longue durée* settlement patterns in the Zagros folding zone of southwestern Iran has remained quite limited until recently. In fact, despite the efforts of scholars such as Zagarell and Nissen, it wasn't until Potts, Roustāei, Petrie and Weeks' team finished the first stage of the comprehensive Mamasani archaeology project (2002–2008)<sup>11</sup> that a substantive picture of settlement patterns in an analogous, though geomorphologically different, region in the Susiana-Fars intercultural zone began to emerge:

Until 2002, it was still the case that, aside from studies of rock reliefs like Kurangan, Da-o Dukhtar, and Sarab-e Bahram, or Sasanian sites further south such as Bishapur and Firuzabad, very little was known about the intervening area between Susa [on the Susiana plain] and Anšan [near Shiraz in Fars].<sup>12</sup>

The Mamasani region of the Southern Zagros is distinct from the Zagros folding zone, being composed of a series of relatively small but fertile enclosed alluvial plains, upon which sit a number of *talls*, or settlement mounds. By taking careful soundings of a number of these *talls*, the Mamasani team was able to record and document a secure stratigraphic sequence of cultural phases in the region from the Epipalaeolithic to Islamic times.<sup>13</sup> Their findings are likely to have implications for settlement patterns and cultural change in other parts of the Southern Zagros Mountains; however, the differences between the Khersan River valley and the Mamasani region are significant and germane.

First, the Mamasani region is around 140 km south-southeast of the upper Khersān River, located over some quite forbidding terrain, making significant differences in cultural development and settlement patterns likely. Second, flat fertile plains of virtually any size are absent in the Khersān and adjacent valleys, a condition which would appear to rule out the formation of the relatively densely populated long-term settlements required for the creation of *talls*. Deep multi-phase deposits of the type studied at Mamasani may be rare or absent in the Khersān Valley. Settlement patterns in many parts of the Zagros folding zone will probably have to be pieced together by other methods than those employed by Potts *et al.* on the intermontane alluvial plains.

It is not possible to offer in this paper more than an impressionistic understanding of settlement patterns in the Khersan Valley, and by implication the Zagros folding zone, and how they fit into the wider regional picture, not least because our understanding of the region's micro-stylistic ceramics chronologies is still poor. However, the authors are able to suggest a way in which this important question may be answered in future. The rapid advancement of Iran's dam building programme in the past two decades increasingly provides us with one means by which we can start to fill in the picture. In this area of the Southern Zagros alone, two dams have been built and a further six are planned or under construction (see Fig. 1).<sup>14</sup> Surveys of all projects in these hitherto

<sup>11</sup> Potts *et al.* 2009.

<sup>12</sup> Potts 2013a, p. 130.

<sup>13</sup> Potts *et al.* 2009, pp. 150–157.

<sup>14</sup> Along the 150 km of the Khersan River alone, itself part of the upper reaches of the greater Karun-[1]Arvandrud river system, no less than three archaeological surveys have been completed for different dam projects in the past decade[1].



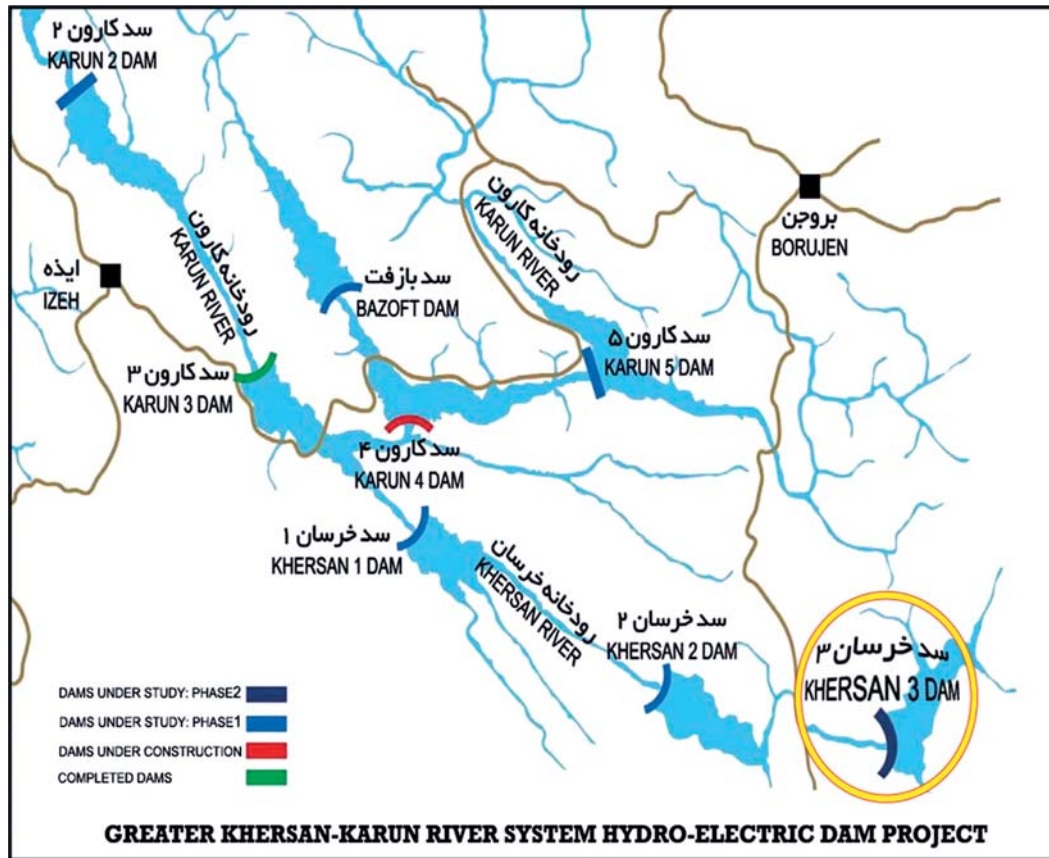


Fig. 1. The planned Kheršan 3 reservoir relative to the larger dam-building scheme in the Southern Zagros, indicating the monumental scale of the archaeological surveys recently undertaken (map adapted from, and courtesy of, the Archives Unit of the Kheršan 3 consulting civil engineering company, Āban Pazhuḥ).

archaeologically neglected areas have been conducted, an undertaking of which the present paper is one outcome. As things stand, very few of these surveys have been published. In addition, little work has been done to integrate the different data sets, which would allow us to assemble a broader view of the historical settlement patterns indicatively observed in the Kheršan 3 survey. What is clear is that the results of these hydro surveys have the potential to help shape and clarify research agendas for future archaeological programmes, including excavations. Such programmes will offer us more nuanced insights into how these remote and rugged regions were settled and by whom, how populations changed, and how ways of life were adapted over time to create societies at home in this rugged environment lacking fertile alluvial plains.

If these were integrated into a “greater Kheršan study”, it might offer us the beginnings of a more comprehensive picture of the record of human settlement in a typical valley in the Zagros folding zone.



### The Khersān: Geography, Geomorphology and Environment

The Khersān River is one of the main tributaries of the Kārun River, flowing through the southwest of the Semirom District of Isfahan Province, the south of the Lordegān district (Chahār Mahāl o Bakhtiārī) and the southeast centre of the Īzeh district (Khuzestān). The river has a length of around 150 km and is created by the confluence of the Semirom and Mārbar Rivers about 20 km west-northwest of the town of Namdagun-Komeh. Along its route, it also receives the waters of the Peruz and Garm/Beshār Rivers.<sup>15</sup> The Khersān's average flow rate at the dam construction site is 94.3 m<sup>3</sup> of water per second, making for a total annual discharge of 2971 million m<sup>3</sup>.

The Khersān 3 Dam will be 45 km southwest of the Lordegān district centre in the province of Chahār Mahāl o Bakhtiārī, built to a height of 148 m on the upper reaches of the Khersān River. The aim of the construction of this dam is to produce and supply up to 1121 GW of hydroelectricity to the Iranian national grid. The area designated to be the reservoir is located along the border between the Lordegān district of Chahārmahāl-o Bakhtiārī Province and Denā district of Kohgīlūye-o Būyer-Ahmad Province. The dam reservoir for Khersān 3 will be around, or just under, 40 km long with a maximum width of less than 2 km, having an overall extent of 24.5 km<sup>2</sup> (Fig. 2).



Fig. 2. Site of the planned Khersān 3 Dam, 45 km southwest of the Lordegān district centre in the province of Chahār Mahāl o Bakhtiārī.

<sup>15</sup> *Geographical Dictionary of the Rivers of the Country: Persian Gulf and Sea of Oman Catchment Area* 1384/2005 (Publication of the Geographical Organization of the Armed Forces of IR Iran), 1st ed. Tehran: Sāzmān-e Geogrāfiyā-ye Niroohā-ye Mosalah, pp. 119-120.

The Khersān valley is geologically part of the Zagros stratified folded mountain system (ZSFMS), one of the two parallel geological zones comprising the Zagros Mountain range, the other being the highland zone, situated to the northeast, abutting the Iranian Plateau. In turn, the ZSFMS can be divided into two sub-zones, the northeast and the southeast, with the Khersān river system traversing the southeast portion. The folding geomorphology of the ZSFMS is predominantly karstic, a feature which in other areas has been found to have exerted an influence on settlement patterns from Palaeolithic times.<sup>16</sup> The folds of the ZSFMS along the fault run northwest to southeast in a series of regular anticlines and synclines. The system is on average 250 km wide. The Rig anticline is the broadest at 10 km and the Shurum anticline is the longest at 28 km.

The reservoir will be formed where the Khersān River cuts the plunge of the Laki anticline, at the foot of the high Rig and Shurum anticlines.<sup>17</sup> The Rig anticline is the highest, topping 3386 m asl. The synclines in this area are mostly closed and composed of deep, narrow valleys. The most important peaks in the region are Mount Kohgiluyeh at 2567 m, Mount Shurum at 2645 m, Mount Narmeh at 2470 m and Mount Rig at 3427 m.<sup>18</sup> The formations comprising the bedrock within the reservoir area are a sequence of alluvial rocks dating from the early Oligocene to the late Pliocene. This series of sediments are, in order of oldest to most recent, the Āsmāri formation, the Gachsārān formation and the Bakhtiyāri formation. In addition to these formations, the reservoir zone is also covered by layers of material such as soils in place, soils washed down from the piedmont, eroded stone and river alluvium.<sup>19</sup> The normal service surface level of the reservoir will be 1432 m asl with a maximum engineered level of 1440 m asl.

The catchment area for the dam and Khersān 3 power station is overwhelmingly mountainous. The large area of the catchment and the undulating presence of the Zagros Mountains make for a climate of considerable variability across different zones within the region. The climate in the eastern areas is semi-arid and cold, while in the southern and western regions it is moderate and semi-moist to moist (Fig. 3).<sup>20</sup> In Köppen's climate classification system, part of the reservoir area is categorised as arid semi-desert, and part as having a moderate mountainous climate with relatively hot summers. The annual average temperature across the Khersān 3 zone is 16.7°C. Average rainfall in the Khersān 3 watershed is estimated to be 585.4 mm per year and average annual relative humidity, 48 per cent.

The mountainous conditions and the generally moderate climate allow the woodland cover in this area to be quite dense. Forests grow on the higher levels of the piedmonts and valleys, and are mostly composed of oak (*Quercus brantii*), *Pistacia atlantica* (wild pistachio), *Pistacia khinjuk*, *Amygdalus reuteri*, *A. scoparia* (mountain almond), *A. lycioides*, *Crataegus aronia* (hawthorn), and *Astragalus gossypinus* (from which tragacanth gum is derived). In total, 62 species of trees and

<sup>16</sup> Conard *et al.* 2005.

<sup>17</sup> Krešić and Stevanović 2009, p. 504.

<sup>18</sup> *Geological Report Map 1/100000 Denā*: Document number 6252 (1999), (Publication of the Iranian National Geological and Mineralogical Exploration Organization). Tehran: Sāzmān-e Zaminshenāsi va Ekteshāfāt-e Ma'dani-ye Keshvar.

<sup>19</sup> *Geological Report Map 1/100000 Denā*, no. 6252.

<sup>20</sup> Krešić and Stevanović 2009, p. 504.



Fig. 3. General view of eastern upstream portion of the planned dam.



Fig. 4. Most villages harvest oak for use as firewood and cooking fuel.





Fig. 5. Part of the process of turning acorns into an edible form in Fāj village.

shrubs have been identified, along with 53 species of grassland and meadow plants. Of these, 13 are endemic and 37 are considered rare and/or endangered. In general, the density of oak in the region is greater than that of other species. The leaves and branches of the trees are used as fodder for the pastoralists' herds and, in winter, as fuel for heating and cooking fires. Other products from the forests include construction materials and nutritional and traditional medicinal substances made from the oak trees (Figs 4, 5). In terms of faunal diversity, 31 species of mammal have been identified within the planned dam reservoir so far. The larger species include Iranian squirrels, chipmunks, wolves, foxes, hyenas, otters, brown bears, leopards, long-winged bats, martens, lynxes, wild cats and mountain goats. Eighty species of bird have also been identified. A number of fish and reptile species are also present.

### Present-Day Communities in the Reservoir Area

The communities living in the region are composed of elements of two large Lori tribal confederations, the Bakhtiyāri and the Boyer Ahmadi, each of which has long had both mobile pastoralist and settled members. Many of the mobile pastoralists traditionally maintain a house in one of the villages in the winter grazing grounds and reside there over winter. There are 24 villages in the area, located quite close to each other. Ten are located on the Chahār Mahal-o Bakhtiyāri side and 14 on the Kohgīlūye-o Būyer-Ahmadi side (Fig. 6). The total population



Fig. 6. Deh Gāh village beside the Khersān River on the Chahār Mahal-o Bakhtiyāri side.

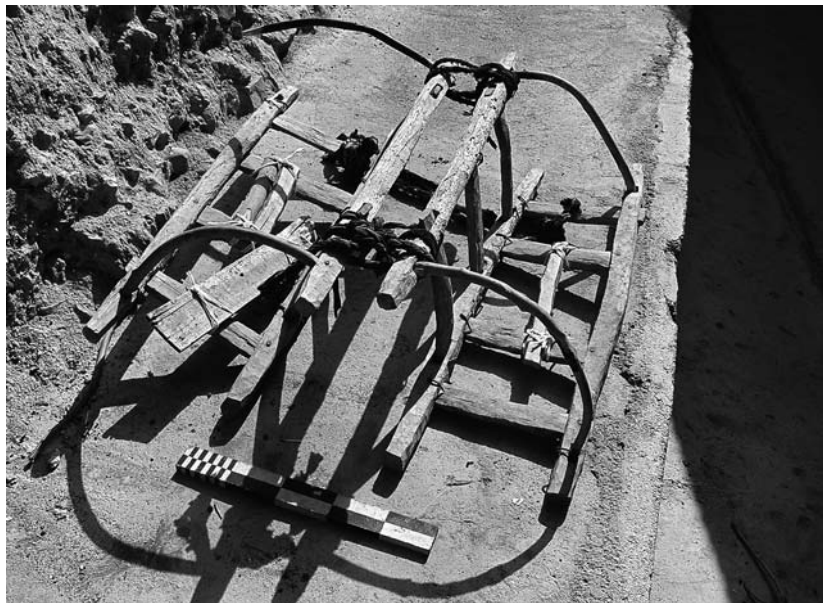


Fig. 7. A “bard kesh”, used for transporting building materials such as plaster, stone and cement on the backs of beasts of burden, including donkeys.

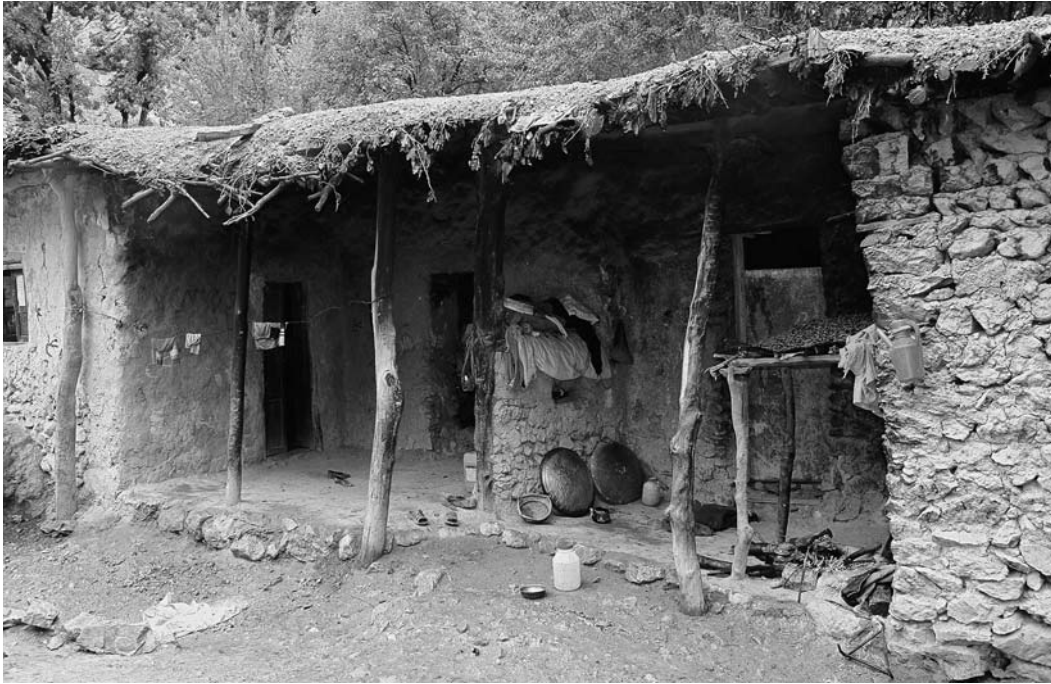


Fig. 8. A house in Faj village constructed of stone, wood, plaster and clay.

of the villages is 4173.<sup>21</sup> The most populous of them is Dozak. The villages are mostly sited on the banks of the Kheršan River or on the lower hills overlooking the river. Building materials — plaster, stone and cement — are brought in on the backs of beasts of burden such as donkeys (Figs 7, 8). Wood for roof beams and supports is obtained from local oak forests around the river. Heavy beams are hewn upriver and floated down to a point near the village, then hauled ashore (this system operates especially in Gahkadeh, Dehgah, Faj, Dourak, Mono, Durak and Atashgah). The density of settlements in the upstream part of the Kheršan 3 area is indicative of a more favourable environment, including larger parcels of arable land (Fig. 9), in addition to easy access to water resources and also proximity to the main road between Yasuj and Esfahān.

Despite the Kheršan River having played a very important role in settlement in the region, the main arable fields are located at a higher elevation than the river. This has made use of the river for agricultural purposes (such as irrigation) largely impractical. In some places this problem has been resolved through use of artesian springs and small seasonal or permanent streams.

The main occupation of the local people is agriculture and, more rarely nowadays, pastoralism. The most important arable crops produced here are rice, wheat and barley, grown via both

<sup>21</sup> I.R. Iran National Census statistics 1385/2006.





Fig. 9. The upstream half of the Khersān 3 area has a slightly more forgiving environment, including larger parcels of arable land.

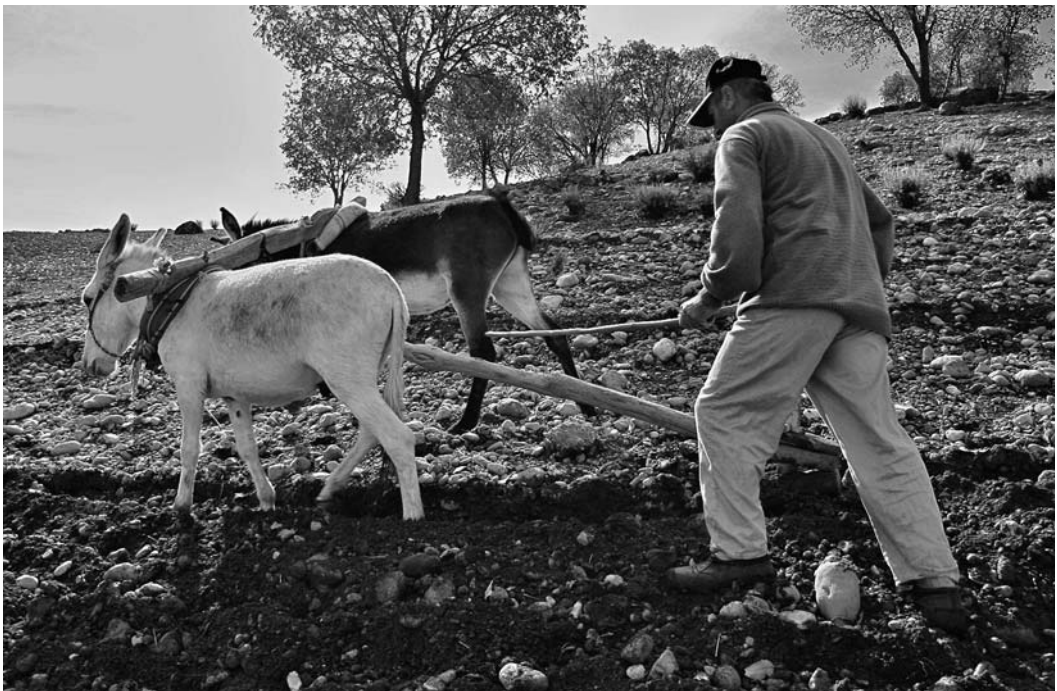


Fig. 10. Use of donkeys instead of oxen to plough the steep slopes along the riverbanks.

wet and dry cultivation techniques. The harvests are relatively small and are mainly consumed locally, with little surplus available to send to market. Wet cultivation is usually small scale and limited to the narrow margins on both sides of the river Khersān. The dry-cultivation fields are mostly on the high ground, piedmont and slopes of earth hills, which are ploughed by donkeys (Fig. 10). The majority of the arable land in the region is cultivated using the dry-land cultivation technique. Nowadays, agricultural cropping has a more important role in the lives of the region's people, with pastoralism becoming somewhat less important. Most people now live a sedentary agricultural life.

Winter grazing grounds are located around the river and on the piedmont. In winter the lowland grazing grounds around the river have a moderate climate, while in summer they are hot and dry. The upland summer grazing grounds, however, on the heights of the mountain ranges, have cold winters and hot summers. Migratory nomadism, or vertical mobile pastoralism, takes place within the region, meaning people and animals move seasonally from uplands to lowlands and vice versa.<sup>22</sup>

### Survey Methodology

The Khersān 3 survey was part of a salvage investigation, so an intensive survey methodology was employed in order to identify as many archaeological sites as possible. First, maps of the area of the dam, with a scale of 1/25000 and 1/10000, were drawn up and then the area designated to be the reservoir was divided into two grid-square zones — in the northwestern part (downstream) and the southeastern part (upstream). For the purposes of the survey, the surface water level of the future reservoir was taken to be 1440 m asl. This was calculated by adding several metres to the planned normal lake level to allow a margin for possible damage by rising waters to any archaeological features located above that line. Then, a field investigation group conducted an intensive, comprehensive survey within the zone, in the area around the construction site of the dam, and in Shush village (the nearest village to the construction site).

After the identification of a site, its approximate extent was determined based on the distribution of surface finds and the morphology of the location. Cultural material scattered at the site, such as pottery and stone tools, was collected in a simple random sampling way and plotted on a finds map. The collection of material during these field walks did not privilege any specific period at a site, and diagnostic examples of all objects were collected, transferred to our field research camp and, there, drawn, described and classified. To simplify the identification of sites, each was given a GPS identification code, composed of two letters and one numeral — “Kh3”, meaning Khersān 3, followed by a number signifying the individual site. For example, “Kh3-1” refers to site number one of the Khersan 3 survey. In addition to the archaeological survey, a human geographical study was also undertaken. The study recorded information about the customs, beliefs, method of earning a living, way of life, migration routes, and genealogy of the local inhabitants, among other things.

<sup>22</sup> Alizādeh 2010, p. 354.

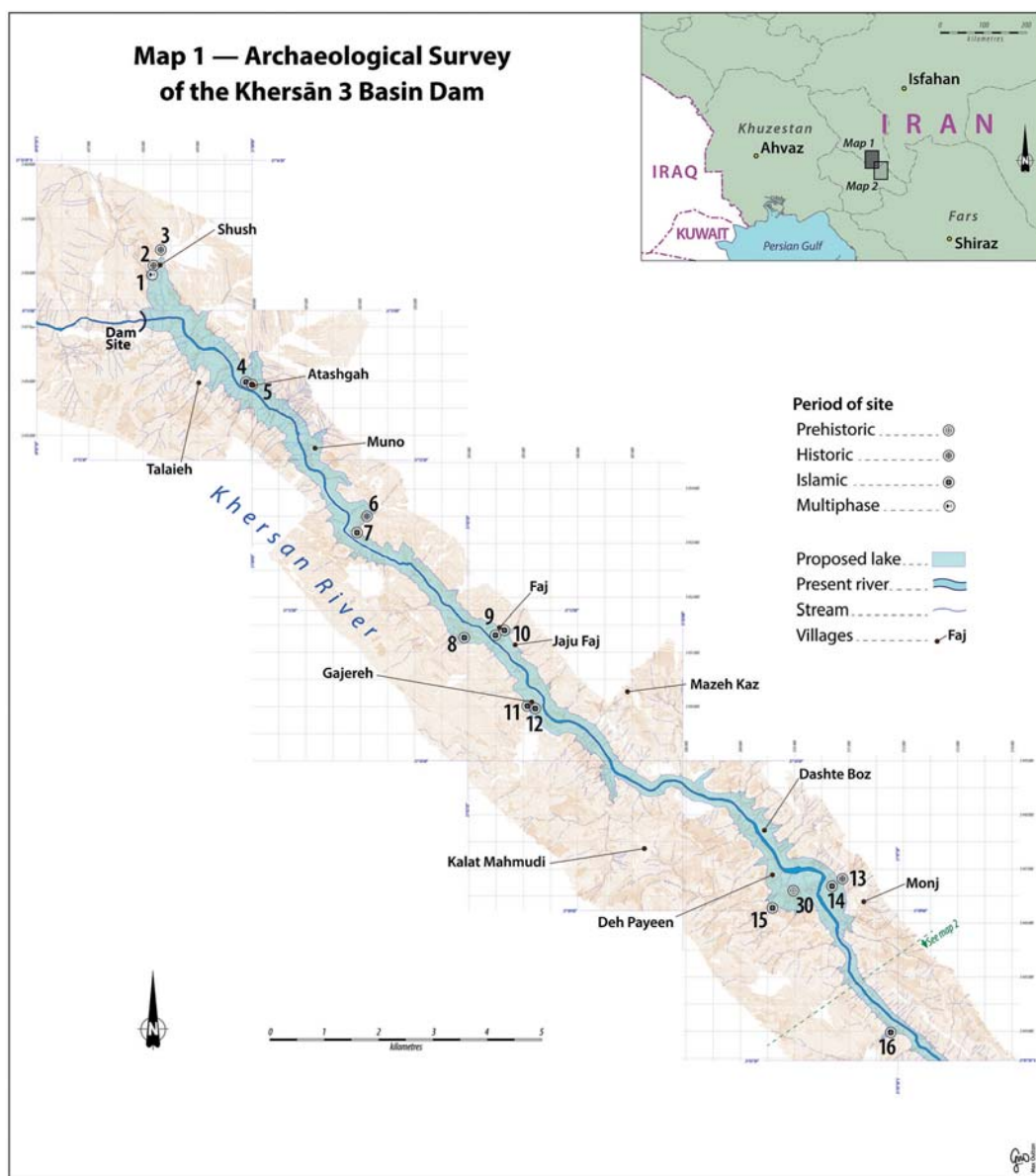


Fig. 11. Map 1: Downstream half of the Khersān 3 reservoir and archaeological sites.

### Sites Identified

In the course of one season of intensive field survey in the area of the planned Khersān 3 Dam, 29 archaeological sites were identified and assessed (Figs 11, 12). A season of follow-up excavations in March to April 2013 uncovered one further important site, an extensive cemetery east and southeast of Deh Pāyeen village, probably dating to the third and second millennia BCE. The sites can be categorised as follows:



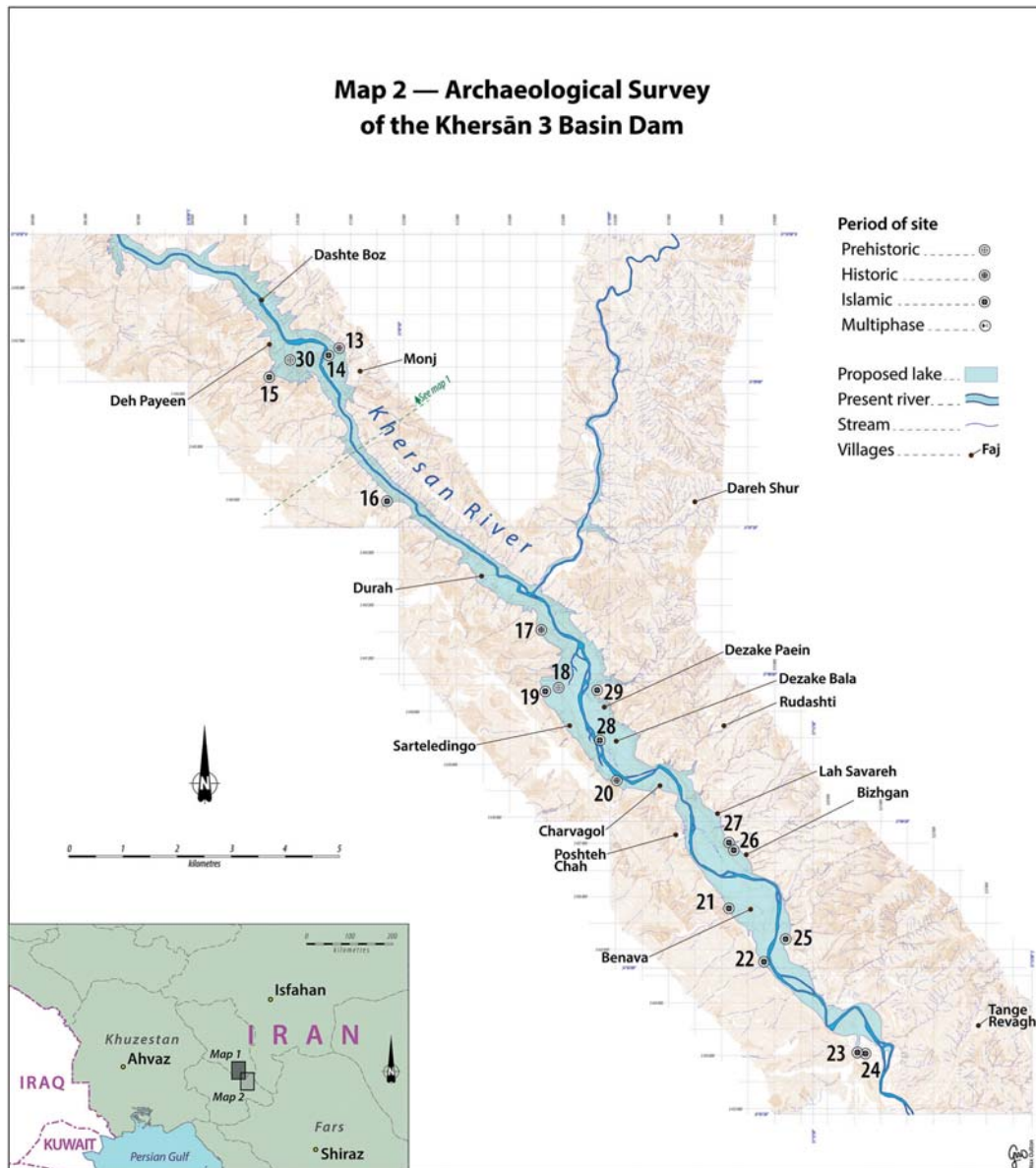


Fig. 12. Map 2: Upstream half of the Kheršan 3 reservoir and archaeological sites.

- a. Seven settlement sites with a scatter of pottery sherds but no evident architectural remains
- b. Nine habitation sites with a scatter of pottery sherds and limited evidence of architectural features in the form of building foundations
- c. Buildings, which include two types:
  1. Eight water-driven gristmills
  2. One building of stone and plaster mortar which may be a fort

## d. Burial structures of three sorts:

1. Three burial grounds/cemeteries (Varkab cemetery, Sarsour burial ground and the cemetery at Deh Pāyeen identified in 2013)
2. Two rock-cut tombs, *barde guri* in the local dialect (*ostudān* or *dakhmas* in Persian)
3. One Islamic shrine (an *Imamzādeh*)

The sites identified date from the late sixth millennia BCE through to the later Islamic centuries. The relative chronology of the sites was established based on ceramic and architectural evidence. The distribution of these sites — on the piedmont, among the rock outcrops, on top of earth hills of varying heights around the river, and on the level ground along the river — ranges between 1302 and 1479 m asl (Table 1). Overall, the habitation sites are mainly located along the steep slopes and close to the Khersān River or its tributary the Beshār/Garm. Geomorphologically, the downstream half of the reservoir is mostly mountainous and access tracks are difficult and unsealed. It is an environment more suited to mobile pastoralists than settlement. The sites identified in this part were located beside the packhorse track (sites 6 and 7). The upstream half of the reservoir is more accessible and there are patches of wet rice paddy fields along the riverside.

| Site number | Site name                     | Elevation asl | Height above ground level | Extent (m <sup>2</sup> ) | Type of site   | Geo-morphology                            | Cultural Period                 |
|-------------|-------------------------------|---------------|---------------------------|--------------------------|--|---|---------------------------------|
| Kh3-1       | Shush                         | 1405          | 1                         | 3000                     | Scatter of pottery and grey layer                          | On a natural hill                         | Prehistoric?, Historic, Islamic |
| Kh3-2       | Gurdakmeh (chalekhaneh) Shush | 1422          | .90                       | 4                        | Structure  | Piece of stone hewn from the mountainside | Historic                        |
| Kh3-3       | Gurdakmeh, Shush Valley       | 1479          | 1                         | —                        | Structure  | Mountain wall                             | Historic                        |
| Kh3-4       | Ghaleh Ātashgāh               | 1314          | 1.90                      | —                        | Structure  | On level ground                           | Islamic                         |
| Kh3-5       | Watermill Ātashgāh            | 1313          | 5.20                      | —                        | Structure  | The edge of a natural hill                | Islamic                         |
| Kh3-6       | Varkāb site                   | 1426          | 2                         | 400                      | Surface scatter of pottery and stone architectural remains | On a natural hill                         | Historic                        |
| Kh3-7       | Gardāneh Kalāt cemetery       | 1146          | —                         | 1500                     | Burial ground  | On a natural hill                         | Islamic                         |



| Site number | Site name                 | Elevation asl | Height above ground level | Extent (m <sup>2</sup> ) | Type of site  | Geo-morphology       | Cultural Period |
|-------------|---------------------------|---------------|---------------------------|--------------------------|---|----------------------|-----------------|
| Kh3-8       | Dehgāh site               | 1302          | —                         | —                        | Surface scatter of pottery                            | Steep mountain slope | Islamic         |
| Kh3-9       | Fāj site                  | 1376          | —                         | —                        | Surface scatter of pottery                            | Steep Mountain slope | Islamic         |
| Kh3-10      | Fāj watermill             | 1386          | 3.70                      | —                        | Structure   | In a gorge           | Islamic         |
| Kh3-11      | Gāhkadeh site             | 1375          | —                         | —                        | Surface scatter of pottery                            | On a natural hill    | Islamic         |
| Kh3-12      | Gāhkadeh watermill        | 1358          | 5.90                      | —                        | Structure   | On the riverbank     | Islamic         |
| Kh3-13      | Monj site                 | 1437          | —                         | 1800                     | Surface scatter of pottery                            | Mountain slope       | Historic        |
| Kh3-14      | The Shrine of Imam 'Adnān | 1392          | 3                         | 16                       | Structure   | On level ground      | Islamic         |
| Kh3-15      | Ghaleh Deh Pāyeen site    | 1433          | 2                         | 10000                    | Mound and surface scatter of pottery                  | On a natural hill    | Islamic         |
| Kh3-16      | Watermill of Deh Darag    | 1407          | 4                         | —                        | Structure   | On the riverbank     | Islamic         |
| Kh3-17      | Sarsour site              | 1429          | .1                        | 500                      | Probable burial ground                                | On a natural hill    | Historic        |
| Kh3-18      | Dingu 1 site              | 1417          | 2                         | 10000                    | Surface scatter of pottery and architectural features | On a natural hill    | Prehistoric     |
| Kh3-19      | Dingu 2 site              | 1423          | —                         | 1000                     | Surface scatter of pottery and stone foundations      | On a natural hill    | Islamic         |
| Kh3-20      | Tang-e Māl Geh site       | 1391          | —                         | 3500                     | Surface scatter of pottery                            | Mountain slope       | Historic        |

| Site number | Site name                   | Elevation<br>asl | Height<br>above<br>ground level | Extent<br>(m <sup>2</sup> ) | Type of site   | Geo-morphology   | Cultural<br>Period |
|-------------|-----------------------------|------------------|---------------------------------|-----------------------------|--|--|--------------------|
| Kh3-21      | Benavā 1 site               | 1441             | 2                               | 4000                        | Surface<br>scatter of<br>pottery and<br>stone<br>architectural<br>features               | Riverbank  | Islamic            |
| Kh3-22      | Benavā 2 site               | 1434             | –                               | 4000                        | Surface<br>scatter of<br>pottery and<br>stone<br>architectural<br>features               | Mountain slope   | Islamic            |
| Kh3-23      | Gol Miyān 1<br>watermill    | 1447             | 3.80                            | –                           | Structure  | Riverbank  | Islamic            |
| Kh3-24      | Gol Miyān 2<br>watermill    | 1141             | 4                               | –                           | Structure  | Riverbank  | Islamic            |
| Kh3-25      | Cham Gardel<br>watermill    | 1420             | 3.30                            | –                           | Structure  | Edge of a natural<br>mound                                 | Islamic            |
| Kh3-26      | Bizhegan<br>watermill       | 1445             | 1.10                            | –                           | Structure  | Edge of a natural<br>mound                                 | Islamic            |
| Kh3-27      | Bizhegan site               | 1443             | 1                               | 1800                        | Surface<br>scatter of<br>pottery and<br>stone<br>architectural<br>remains                | On a natural hill  | Islamic            |
| Kh3-28      | Kushak-e<br>Dozak           | 1405             | 1                               | –                           | Structure  | On a rock<br>outcrop/boulder                               | Islamic            |
| Kh3-29      | Dozak site                  | 1448             | –                               | 1400                        | Surface<br>scatter of<br>pottery   | On a natural hill  | Islamic            |
| Kh3-30      | Deh Pāyeen<br>cemetery site | 1425             | –.5 to –1                       | 20000                       | Illegally<br>excavated<br>pits<br>exposing<br>stone grave<br>lining and<br>sealing slabs | On flat ground<br>and adjacent<br>slopes of earth<br>hills | Bronze Age         |

Table 1. Details of archaeological sites identified within the planned reservoir area of the Khersān 3 Dam.



Fig. 13. The Dingu 1 site, eastern view.

### *Prehistoric Period Sites*

The most ancient cultural material identified in the reservoir area of the Khersān 3 Dam was found at the Dingu 1 site (Kh3-18). The one-hectare site is to the northwest of Dingu village in the agricultural fields of Seyyed Mohammad Hosseinirād, with an east-west length of 120 m and a north-south width of about 80 m, at an elevation of 1417 m asl. It is surrounded by oak trees (Fig. 13). Because of the proximity of this site to the Beshār River and the presence of level, cultivatable ground, it is considered likely that the inhabitants used the river for agricultural purposes. The scatter of pottery found at this site is abraded in a manner suggesting it has been in soil moved around in the course of agricultural activities over a long period of time. The site has also been extensively modified by bulldozer levelling and construction activities.

Archaeological material found at this site includes ceramic sherds, architectural remains, layers of ash and pieces of bone revealed in the bulldozer cuts. There are a large number of potsherds on the surface of the site, scattered in the cuts created by the bulldozer and on the areas of arable land. The visible architectural features comprise the foundations of a stone revetment, and rock rubble building materials. In addition, the cuts have revealed layers that appear to be ash with pieces of bone. The distribution and extent of the potsherds seems to suggest that the greater part of the site is located within the new fenced enclosure.

Many potsherds were recovered from the surface. The colour of the fabric varies between orange, grey, buff and brown. Most have a fine sand and straw temper, but a number have a very fine temper with no visible inclusions. Much of the pottery is without slip and it is approximately evenly divided between hand made and wheel thrown. It has been fired at a sufficient temperature.

The pottery at Dingu 1 is dated to the prehistoric period and is divided into two types: plain and painted. The temper of this ware is mostly of the fine-clayed type with no visible inclusions. The decoration is painted in brown, red and a dark green, in wavy horizontal parallel bands, with some of the decoration applied diagonally. Other vessels have chequerboard or grid-square cross-hatched designs. This painted ware is comparable with attested pottery from the Middle and New Susiana periods (*ca.* 5200–3800 BCE). The vessel forms found at this site include bowls and jugs with diagonal everted rims (Fig. 14, Table 2).<sup>23</sup>

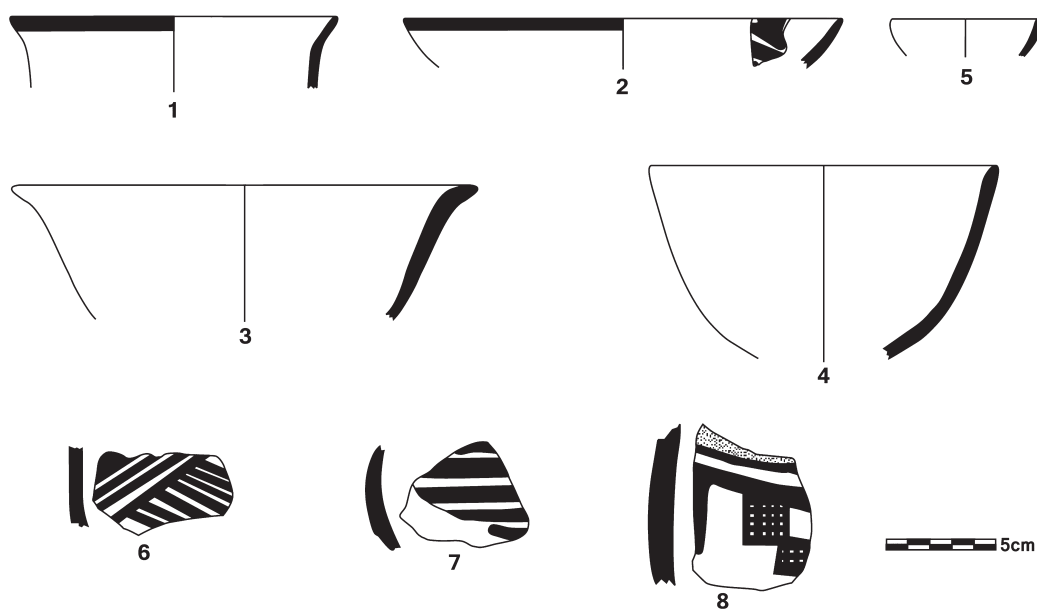


Fig. 14. Sketch of diagnostic pottery from the Dingu 1 site.

| Number | Details (fabric, grog, glaze/slip, firing)  | Period             | Comparative source                   |
|--------|---|--------------------|--------------------------------------|
| 1      | Buff fabric, unknown grog, without slip, wheel thrown, sufficient firing, brown coloured design | Middle Susiana     | Alizadeh 2008, p. 283 fig. 37: d,h,c |
| 2      | Buff, unknown grog without slip, wheel thrown, sufficient firing, light brown coloured design   | Middle-New Susiana | Alizadeh 2008, p. 283 fig. 37: d,h,c |

<sup>23</sup> Images of this pottery have been seen by Dr Abbās Alizādeh and he is also of the belief that this dating is correct. See Alizadeh 2008b, p. 283: d, h, and c; also, Delougaz and Kantor 1996, p. 169.

| Number | Details (fabric, grog, glaze/slip, firing)   | Period             | Comparative source                        |
|--------|--|--------------------|---|
| 3      | Grey fabric, unknown grog without glaze or slip, hand made, sufficient firing                                  | Middle-New Susiana | Delogaz and Kantor 1996, p. 16 fig. t,u,v |
| 4      | Buff fabric, unknown grog without slip, hand made, sufficient firing   |                    |   |
| 5      | Orange fabric, unknown grog thick buff clay slip both inside and outside, hand made, red painted designs       | Middle Susiana     |   |
| 6      | Buff fabric, unknown grog, without glaze or slip, wheel thrown, sufficient firing, light brown painted designs |                    |   |
| 7      | Buff fabric unknown grog without glaze or slip, wheel thrown, sufficiently fired light brown painted designs   |                    |   |
| 8      | Buff fabric, unknown grog without glaze or slip, wheel thrown, sufficiently fired, dark green painted designs  | Middle-New Susiana | Delogaz and Kantor 1996, p. 16 fig. t,u,v |

Table 2. Details of diagnostic pottery found at the Dingu 1 site.

The existence of a site of the Middle Susiana phase (late sixth millennium BCE) in this area indicates that the local communities of this period were in contact with lowland regions to the west. It is still unclear to what degree these early communities had “mobile pastoralist” lifestyles of the type described by Alizadeh and maintained until very recent times by local communities.<sup>24</sup> If we are seeing evidence of mobile pastoralists here, this may be among the earliest archaeological records of them, since Alizadeh dates the hypothetical establishment of this settlement pattern to precisely the fifth millennium BCE.<sup>25</sup>

The most important prehistoric site after Dingu 1 is the Deh Pāyeen cemetery (Kh3-30). This extensive burial ground, identified in Spring 2013 east and southeast of Deh Pāyeen village, probably dates to the Bronze Age (third millennium BCE). It has been the subject of illegal excavations by antiquities looters in recent years (Fig. 15). The graves are found between 50 cm and 1 m below the current ground surface level, on the southern side of the Khersan River. No surface evidence of its existence was present before the illegal excavations took place. Pieces of stone rubble (grave lining), and flat stone grave lids are now visible on the surface due to the activities of the looters. The distribution of the looters’ pits indicates that the burial ground has an extent of about 3 ha and may even extend further onto the northern and southern slopes of

<sup>24</sup> Alizadeh (2010, p. 353) defines “mobile pastoralism” thus: “The Zagros social groups should not be considered ‘nomads’ in the sense applied to horizontal pastoralists of Central Asian steppes, the Sahara, the Negev, the Jazirah, etc. A more accurate term would be ‘mobile agropastoralists’ or ‘seminomadic agropastoralists.’ We consider their spatial mobility in a politically uncentralized region of southwestern Iran before historical times to be ecologically advantageous and militarily a significant factor in their competition for resources, as well as a political mechanism for survival.”

<sup>25</sup> Alizadeh 2010, p. 354.





Fig. 15. View of the Deh Pāyeen cemetery and two graves with evidence of recent illegal excavations by antiquities looters.



Fig. 16. General view of the graves in Lama Cemetery, and detail of goods found in one grave, including pins, bangles, arrowheads, axes, swords, knives, vessels, ceramic vessels, human remains (photo by Javad Jafari, 2010).



Fig. 17. The Sarsour site, view from the south.

earth hills along the riverbank, containing graves dating to the third and second millennia BCE.<sup>26</sup> This burial ground is about 15 km distant from the excavated graves of the Lamā cemetery (Fig. 16), and about 50 km northwest of the Taj Amir cemetery near Yasuj,<sup>27</sup> with which grave form and construction is comparable.<sup>28</sup> However, the Deh Pāyeen cemetery may pre-date the one at Lamā (late Bronze Age).<sup>29</sup> Important early Bronze Age cemeteries have also been found on plains in another region of the Southern Zagros, at Hakalan and Parchineh.<sup>30</sup>

The oldest site after the Deh Pāyeen cemetery may be Sarsur (Kh3-17). This roughly 500-m<sup>2</sup> site is situated on the top of natural hills south of the Beshār River, among a thick stand of oak trees. It has a length north-south of about 33 m and an east-west width of 15 m. The surface of the site has been completely ploughed over. Archaeological material on the surface includes potsherds and architectural features. There is a pile of cobblestones, rock rubble and the remains of the foundations of a stone building on the southern side of the site. On the western side of the site is a mound 1 m high, on which there is a significant number of churned-up pieces of stone. This rubble may be the remnants of a disturbed gable-roofed grave (*gur-e khar-poshte*), possibly similar to those found at the Lamā burial ground.<sup>31</sup> Among the stones, a flint tool was found, along with a three-flanged iron arrowhead and a great many pieces of pottery. It appears that this site is a burial ground of some sort which has been all but destroyed by agricultural activity (Fig. 17).

<sup>26</sup> Much cultural material has been recovered, but confirmed pottery dating and proper descriptions of metal objects recovered, including tomahawks, swords, types of bowls, and jars, among other things, remain contingent on the submission of a preliminary report to the ICAR.

<sup>27</sup> See Ghezelbash and Jafari 2012.

<sup>28</sup> See Razvāni *et al.* 1386/2007.

<sup>29</sup> The Deh Pāyeen cemetery will be excavated by Reza Nāseri and Ms. Johar of the ICAR in 2013.

<sup>30</sup> See Haerinck and Overlaet 1996; Vanden Berghe 1973a and 1973b.

<sup>31</sup> Rezvāni *et al.* 1386/2007.

The fabric of pottery found at Sarsur is orange in colour, with a fine sand temper.<sup>32</sup> It is not slipped and is wheel thrown and fired at a sufficient temperature. The most important surface find is the three-flanged iron arrowhead, 4.2 cm long and 0.5 cm wide (Fig. 18, Table 3). One of the flanges is broken. Numerous examples of these arrowheads have been obtained as part of grave assemblages, including several from the cemetery excavated at Lamā. This site is potentially important, but obtaining greater certainty about its age and the culture of the individuals buried here will have to wait for possible future excavations.

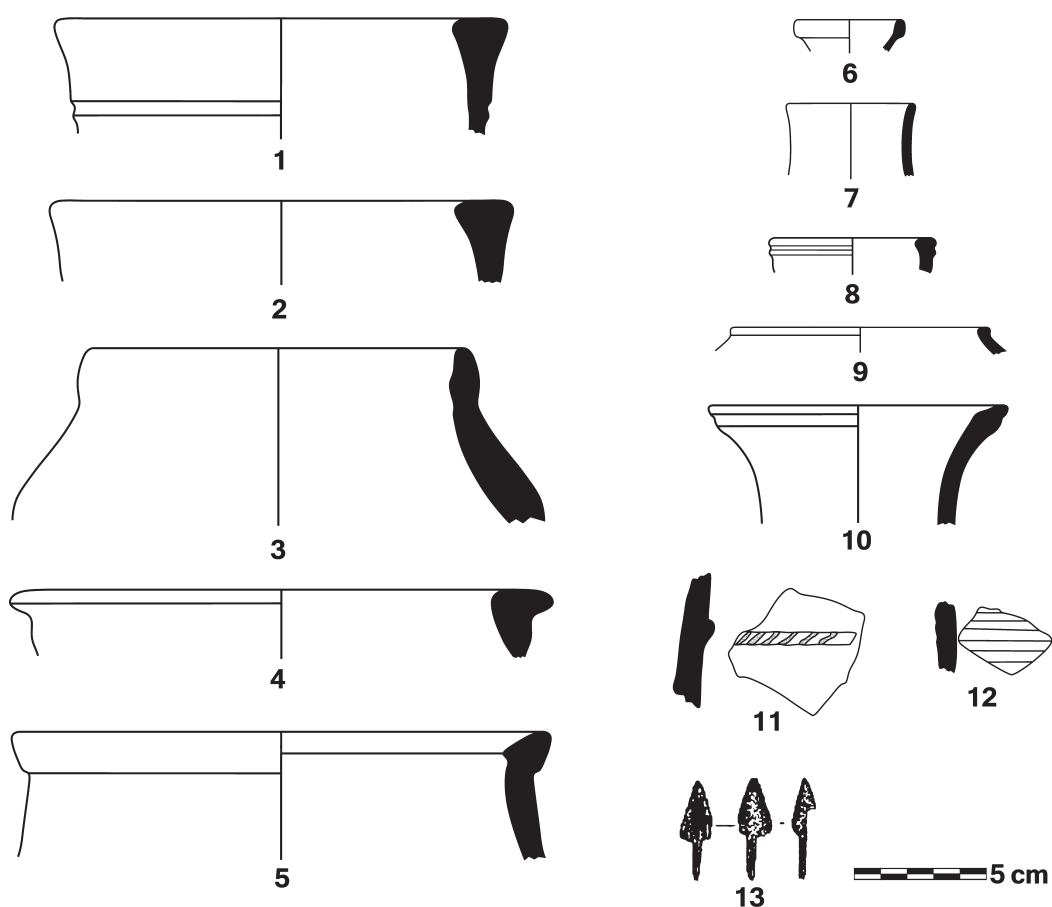


Fig. 18. Design of diagnostic pottery found at the historical/classical period sites.

<sup>32</sup> Again, publication of pottery dating data from this excavation is contingent on the submission of a preliminary report by the dig supervisor to the ICAR.

| Number | Site    | Details (fabric, grog, glaze/slip, firing)  | Period                      | Comparative Source   |
|--------|---------|---|-----------------------------|--|
| 1      | Varkāb  | Orange fabric, tempered by fine and medium sand and limestone, without slip, wheel thrown, sufficient firing, fluted form                                   | Sasanian                    | Whitcomb 1991, p. 185 fig. 18: i   |
| 2      | Varkāb  | Grey fabric, tempered with fine and medium sand and limestone, without slip, wheel thrown, sufficiently fired   | Sasanian                    | Whitcomb 1991, p. 185, fig. 18: i  |
| 3      | Shush   | Grey fabric, tempered with fine and medium sand, thick orange clay slip inside, thick milk-white clay slip on the outside, wheel thrown, sufficiently fired |                             |  |
| 4      | Monj    | Buff fabric, tempered with sand and grit, without glaze or slip, wheel thrown, sufficiently fired   | Late Achaemenid to Parthian | Haerinck 1376/1997, figs 5, 7; Stronach 1379/2000, fig. 120, design 10; Delogaz and Kantor 1996, p. 170, figs J, o; Miroschedji 1987, fig. 64:3. |
| 5      | Monj    | Orange fabric, tempered with sand and limestone, without glaze or slip, wheel thrown, sufficiently fired  | Parthian                    |  |
| 6      | Monj    | Grey fabric, tempered with sand and grit, without slip, wheel thrown, sufficiently fired  | Parthian                    |  |
| 7      | Shush   | Buff-orangey, tempered with sand and limestone grit, thin buff clay slip on interior and exterior, wheel thrown, sufficiently fired                         | Parthian                    | Haerinck, 1376/1997, fig. 6:13   |
| 8      | Sarsour | Orange fabric, tempered with fine sand, without glaze or slip, wheel thrown, sufficiently fired   | Classical                   |  |
| 9      | Varkāb  | Buff fabric, tempered with sand and limestone, without glaze or slip, wheel thrown, sufficiently fired  | Sasanian,                   |  |
| 10     | Shush   | Pale grey body, tempered with fine sand, chaff and white limestone particles, without glaze or slip, wheel thrown, sufficiently fired                       |                             |  |
| 11     | Varkāb  | Orange fabric, tempered with sand and limestone without glaze or slip, hand made, sufficiently fired, fluted form   | Sasanian, Early Islamic     |  |
| 12     | Monj    | Orange fabric, tempered with sand and chaff, without glaze or slip, wheel thrown, sufficiently fired, applied rope-form decoration in relief                | Parthian                    |  |
| 13     | Sarsour | Three-flanged metal arrowhead, 4.2 cm long and 1.1 cm wide, one flange is broken  | Historical                  |  |

Table 3. Details of diagnostic ceramics from historical/classical period sites.



*Historic Period Sites (First Millennium BCE to ca. 650 CE)*

Of the 30 sites identified, seven produced cultural material indicating occupation phases dating to the historical period: Shush (Kh3-1), the *cheleh khāneh* of the Shush Valley (Kh3-2), the *gur-dakhmeh* of the Shush Village (Kh3-3), Varkāb (Kh3-6), Monj (Kh3-13), and Tang-e Māl-Geh (Kh3-20). Two of these sites (Shush and Varkāb) also showed evidence of occupation phases in the Islamic period (Figs 11, 12). Among these seven sites, Kh3-2 and Kh3-3 are rock-cut tombs (or *ossuaries/gur-dakhmeh/bard-e guri*) (Figs 19, 20). One of the graves is set among the rocky outcrops of the mountain, and another is located inside a large boulder standing alone north of the village of Shush. Many examples of these graves have been identified in Chahārmahāl-o Bakhtiyārī,<sup>33</sup> and in Khuzestān and the north of Kohgiluyeh.<sup>34</sup> In most cases, the graves have an access door and a roughly oval interior space with a pillow-shaped terminal section, and a concave front section near the mouth of the grave. The average dimensions of these graves were 1 m by 40 cm. The surrounds of the mouth of one of these *ossuaries*, on high ground above the Sousan Plain, Īzeh, in the Jangeh region, are decorated with Elimaean bas-reliefs,<sup>35</sup> so it is possible that these rock-cut tombs were also used in that period (that is, second century BCE to ca. 220 CE). The plan and structure of these *gur-dakhmehs* is different from Sasanian-period bone repositories (*ossuaries*) found in Fārs Province. The differences in practices related to inhumation and disposal

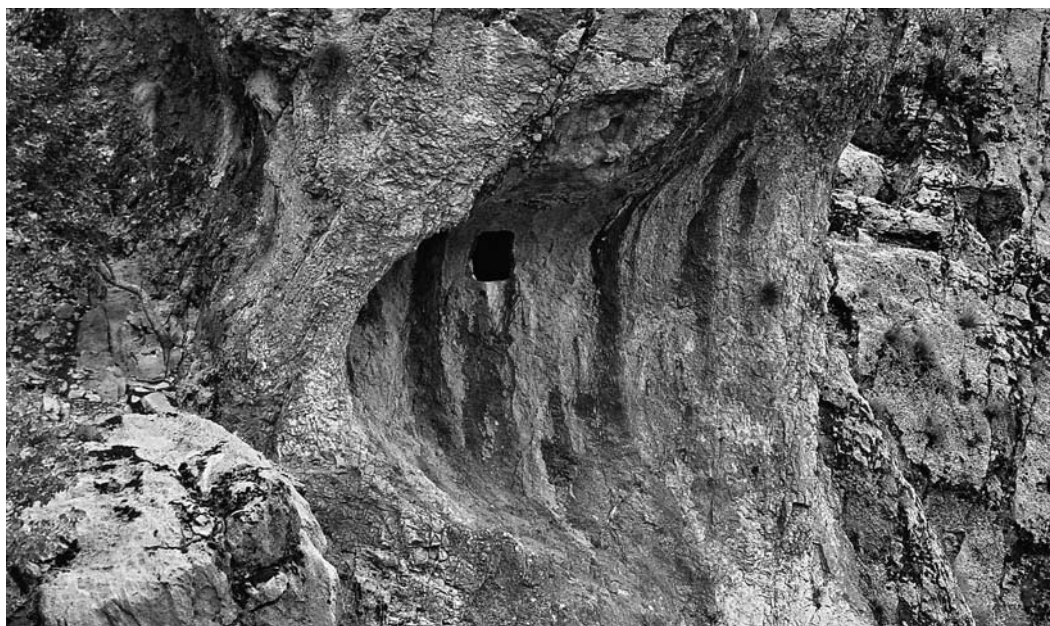


Fig. 19. Rock-cut tomb in the Shush Valley (*pir daloyak* in the local dialect), western view.

<sup>33</sup> Nouruzi 1385/2006; Khosrozādeh 1386/2007; see also Roustāei 1386/2007.

<sup>34</sup> Āzādi 1388/2009 and 1386/2007; Heidari 1377/1998; also, Ghāsemi 1387/2008; and Ghāsemi 2012.

<sup>35</sup> Heidari 1377/1998, p. 204.





Fig. 20. Rock-cut tomb in the Shush Village (*cheleh khāneh* in the local dialect), western view.

of the dead may have been due to this region having remained largely autonomous with respect to the Parthian empire, as the kingdom of Elymais (*ca.* 220 BCE–224 CE). It appears to have preserved a considerable pre-Persian (essentially Elamite) cultural inheritance, distinct from that evolving in the Persian heartland on the Iranian Plateau.

The Shush site (Kh3-1) is another dating to the historical period. It is 1405 m above sea level at the eastern end of Shush village. The site has an extent of around 3000 m<sup>2</sup>, measuring 60 m north to south, with a width of 50 m, but has been heavily modified by residential building. Road-making has also destroyed the eastern portion, with a slice 4 m deep cut away from the natural undulating surface to form the road. Many pieces of ceramics, carbonised wood and fragments of bone have become visible as a result of these activities. Pottery sherds are also widely scattered across the site and on the steep eastern slope of the hill on which the present-day village is sited. A significant number of potsherds can also be seen on the surface of the eastern portion of the site, which is now on private property. The extent and pattern of distribution of the sherds appears to suggest that the present village sits on top of much older occupation phases.

The pottery finds are variously of buff, orange, grey, brown and terracotta fabrics, with both fine sand and straw tempers. In some cases, white limestone inclusions can also be seen. A number of these pieces are covered in a thin clay slip. Most have been wheel thrown and fired at a sufficient temperature. The finds appear to cover two of the broadest periods of Iranian archaeology: the historical and the Islamic. The sherds dating to the historical period have incised decoration, composed of horizontal parallel striations, and relief decoration. This type of decoration continued into the early Islamic period (Figs 18, 21, 22; Tables 3, 4, 5).

The Islamic period ceramic finds are mostly decorated with painted wavy horizontal and diagonal lines on brown and red bodies. These sherds do not have slips and half of them are hand made. Numerous examples of this type of pottery have turned up in surveys of regions of Fars, Kohgīlūye-o Būyer-Ahmad and Chahar Mahal-o Bakhtiari, with most attributed to the Islamic period (Fig. 19; Table 4).

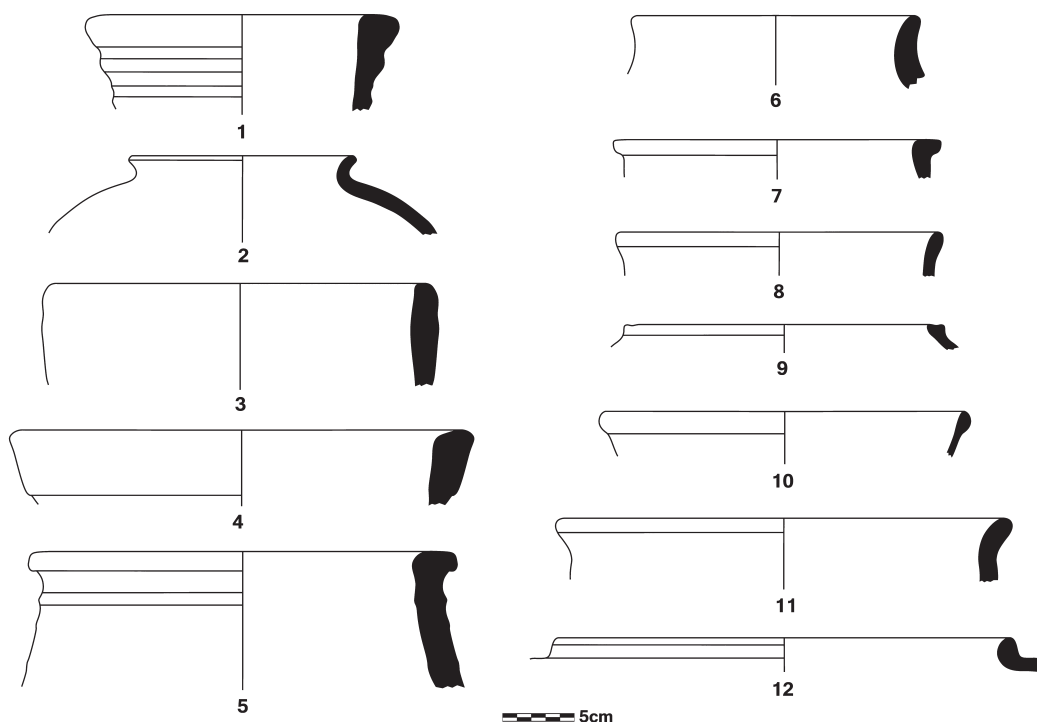


Fig. 21. Diagnostic pottery from Islamic period sites.

| Number | Site Name | Details (fabric, grog, glaze/slip, firing etc.)   | Period  | Comparative source |
|--------|-----------|---|---------|--------------------|
| 1      | Shush     | Dark buff fabric, fine sand tempered, without slip or glaze, wheel thrown, sufficiently fired               |         |                    |
| 2      | Benavā 2  | Light orange fabric, fine and medium sand tempered, without slip or glaze, wheel thrown, sufficiently fired |         |                    |
| 3      | Benavā 2  | Light orange fabric, fine and medium sand tempered, without slip or glaze, wheel thrown, sufficiently fired |         |                    |
| 4      | Dozak     | Grey fabric, fine sand tempered, without glaze or slip, hand made, insufficiently fired                     | Islamic |                    |
| 5      | Dozak     | Brown fabric, fine and medium sand tempered, without slip or glaze, hand made, sufficiently fired           | Islamic |                    |

| Number | Site Name | Details (fabric, grog, glaze/slip, firing etc.)   | Period                    | Comparative source |
|--------|-----------|---|---------------------------|--------------------|
| 6      | Dozak     | Grey fabric, fine and medium sand tempered, without glaze or slip, hand made, insufficiently fired  | Islamic                   |                    |
| 7      | Shush     | Burnt brown fabric, fine sand tempered, external surface damp-hand impressions, hand made, insufficiently fired   |                           |                    |
| 8      | Banavā 1  | Buff fabric, sand and grit tempered, without glaze or slip, wheel thrown, sufficiently fired  | Medieval/late Islamic     |                    |
| 9      | Dingu 2   | Grey fabric, sand and grit tempered, thin buff clay slip on the exterior, wheel thrown, sufficiently fired, external surface embellished with horizontal relief bands | Islamic                   |                    |
| 10     | Banavā 1  | Grey fabric, sand and chaff tempered, thick orange clay slip on both exterior and interior surface, hand made, sufficiently fired                                     | Medieval and late Islamic |                    |
| 11     | Banavā 1  | Orange fabric, sand and grit tempered, thick orange clay slip on both interior and exterior surface, wheel thrown, insufficiently fired                               | Medieval and late Islamic |                    |
| 12     | Dingu 2   | Buff-orangey fabric, sand and limestone grit tempered, without slip or glaze, wheel thrown, sufficiently fired  | Islamic                   |                    |

Table 4. Details of diagnostic pottery from Islamic period sites.

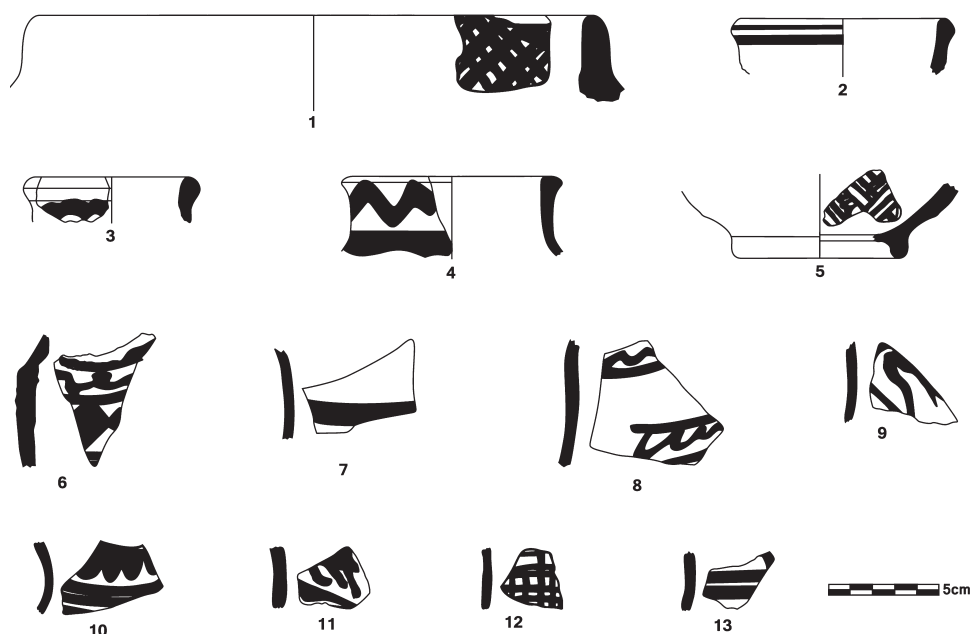


Fig. 22. Painted ceramics from the Islamic period.

| Number | Site       | Details (fabric, grog, glaze/slip, firing etc.)   | Period  | Comparative Source  |
|--------|------------|---|---------|---|
| 1      | Fāj        | Buff fabric, fine sand and limestone tempered, without glaze or slip, wheel thrown, sufficiently fired, dark brown painted designs  | Islamic |   |
| 2      | Fāj        | Brownish fabric, fine sand and limestone tempered, wheel thrown, sufficiently fired, brown painted designs  | Islamic | Whitcomb 1382/2003, fig. 3:b, e, c                                |
| 3      | Fāj        | Orange fabric, tempered with fine sand, without glaze or slip, wheel thrown, sufficiently fired, red painted designs  | Islamic |   |
| 4      | Benavā 2   | Brick red fabric, sand and grit tempered, thin buff clay slip on the interior, dark clay slip on the exterior, wheel thrown, sufficiently fired, brown painted designs inside | Islamic |   |
| 5      | Gāhkadeh   | Grey fabric, sand and limestone tempered, thick orange clay slip on the interior, hand made, brown painted designs  | Islamic |   |
| 6      | Shush      | Orange fabric, sand and limestone tempered, thin buff-orangey clay slip on the interior and exterior, wheel thrown, sufficiently fired, dark brown painted designs            | Islamic | Alizadeh 1373/1994, p. 174, OK                                    |
| 7      | Shush      | Brown fabric, fine sand, grit and limestone tempered, without glaze or slip, wheel thrown, sufficiently fired, red painted designs  | Islamic |   |
| 8      | Shush      | Grey fabric, fine sand and chaff tempered, without glaze or slip, wheel thrown, insufficiently fired, brown painted designs   | Islamic |   |
| 9      | Deh Pāyeen | Grey fabric, fine sand tempered, without glaze or slip, wheel thrown, sufficiently fired, brown painted designs   | Islamic |   |
| 10     | Deh Pāyeen | Orange fabric, fine sand tempered, without glaze or slip, wheel thrown, sufficiently fired, dark red painted designs  | Islamic | Whitcomb 1382/2003, fig. 3:h; also Alizādeh 1373/1994, p. 135, DK |
| 11     | Deh Pāyeen | Buff-orangey fabric, fine sand tempered, without glaze or slip, hand made, sufficiently fired, dark brown painted designs   | Islamic | Alizādeh 1373/1994, pp. 124 and 135, DK                           |
| 12     | Deh Pāyeen | Buff fabric, fine sand tempered, without glaze or slip, hand made, sufficiently fired, brown painted designs  | Islamic |   |
| 13     | Deh Pāyeen | Grey fabric, fine sand tempered, without glaze or slip, hand made, insufficiently fired, dark red painted designs   | Islamic |   |

Table 5. Details of painted ceramics from the Islamic period.

Most of the historical period sites identified are settlement-related and have some limited architectural remains in the form of stone foundations, in addition to a scatter of pottery. They don't appear to have significant archaeological deposits, which may be evidence they were not occupied permanently. This observation would support the proposition that communities in this region maintained mobile-pastoralist ways of life through the historical period, or at least had relatively long-duration phases of being mobile rather than settled (see analysis of settlement patterns further on). The sites are usually located on the tops of low hills and on slopes around the river. A considerable number of potsherds were recovered from the surface of these sites, dating them from the Achaemenid through to the Sasanian period, with some continuity into the early Islamic centuries (Fig. 18; Table 3).

The Dozak and Bizhgan sites have shallow archaeological deposits. Ceramic finds date their occupation to the late Sasanian and early Islamic periods:

The Dozak site (Kh3-29) sits atop a natural hill north of the area's largest village. It is about 1400 m<sup>2</sup> in extent, sloping gently from north to south, with its eastern and western boundaries defined by watercourses. Archaeological finds from this site include an assemblage of pottery (surface finds) and architectural features. The pottery is scattered among stone rubble and pits dug by antiquities looters, and is mainly of a grey fabric. The architectural features include the stone foundations of a building, located on the northeast side of the site. The looters' pits have brought stone rubble to the surface, which may indicate the presence of more architectural remains near the surface. The site has been ploughed by local farmers, and the cultural material brought to the surface as a result also strengthens the possibility that there is another structure below.

Finds from Dozak include six pieces of pottery with a grey fabric, a fine sand temper and inclusions. The pottery is not glazed nor does it have a slip. It is hand made and has been fired at an insufficient temperature. The vessel forms include open mouth jugs with somewhat everted rims. The diagnostic elements of this pottery date it to probably between the end of the Sasanian period and the early Islamic centuries.

The Bizhgān site (Kh3-27) is located 50 m north of the modern Bizhgān cemetery, covering a natural mound. The mound is about 10 m high, and around 1800 m<sup>2</sup>. The undulating site is covered by a thick stand of oak trees. Architectural features are visible at the southern portions of the site and are composed of the foundations of rectangular buildings. It is surmised that these buildings are of the type built by communities that migrated seasonally, because there is not much in the way of archaeological deposits and the site appears to be single phase.

Three potsherds were found on the surface of the site. They were of either a brown or an orange fabric, with chaff, fine and medium sand tempers. The pottery was not glazed or slipped and was fired at a sufficient temperature. One piece was from a handmade vessel, while the other two were wheel thrown. The pottery was decorated with incised parallel horizontal lines and striations. These finds indicate the site, like the one at Dozak, was occupied around the end of the Sasanian period and the beginning of the Islamic period (Fig. 21; Table 4).

#### *Islamic Period Sites (ca. 650 to 1925 CE)*

Most of the archaeological sites surveyed date to the Islamic period (Figs 11, 12). A number of the sites identified as predominantly Islamic period are settlement-related and include Shush





Fig. 23. Deh Pāyeen, a mobile pastoralist site dating to the middle and recent Islamic periods with a scatter of painted pottery. View from the south.

(Kh3-1), Dehgāh (Kh3-8), Fāj (Kh3-9), Dehkadeh (Kh3-11), Qaleh Deh Pāyeen (Kh3-15, Dingū 2 (Kh3-19), Benavā 1 (Kh3-21), and Benavā 2 (Kh3-22).

The local villagers have built houses on some of the sites in recent years, which may mean that a complete understanding of the archaeological remains cannot be arrived at before the reservoir is filled. Usually these sites do not have significant archaeological deposits. The most important diagnostic surface finds are decorated buff, brown and grey ware pottery which is mainly hand made and known as “pseudo-prehistoric” or “Islamic Painted” pottery.<sup>36</sup> This pottery is often without slip, and most examples come with painted decoration. The designs include narrow vertical and horizontal bands, wavy horizontal, vertical, diagonal and cross-hatched lines and curved triangles which are painted onto the external surface of the vessel. Numerous examples of these types of painted ceramics have been identified at sites in Kohgīlūye-o Būyer-Ahmad,<sup>37</sup> Fārs,<sup>38</sup> and Chahārmahāl-o Bakhtiyārī.<sup>39</sup> They have been dated to the early, medieval and later Islamic periods (Figs 21, 22, 23; Tables 4, 5).

The largest of these sites is Benavā 2 (Kh3-22), which is located south of the Beshār River. It has an extent of around 5000 m<sup>2</sup>. Some of the northern parts of the site have been lost due to seasonal flooding of the Beshār. Significant stone foundations are visible on the surface of the site. Surface finds include several pieces of grey, buff and brown ware pottery. The fabric of this

<sup>36</sup> Whitcomb 1991.

<sup>37</sup> Whitcomb 1991; Āzādi 1386/2007.

<sup>38</sup> Alizādeh 1373/1994.

<sup>39</sup> Nouruzi 1384/2005; Kosrozādeh 1386/2007; Roustāei 1386/2007; and Ghāsemi 1387/2008.



Fig. 24. Northern view of a water-driven gristmill's drop tower within the planned reservoir area, near the village of Ātashgāh.

pottery has been tempered with fine and medium sand and white limestone grit. All the pottery is without slip and wheel thrown, and about half of it has been fired at a sufficient temperature. A number of the pottery sherds have groove decoration on the outside surface of the vessel. The general features of this pottery date it to the early and medieval Islamic periods (Fig 21; Table 5).

The burial ground of Gardāneh Kalāt (Kh3-7), is another of the sites identified as dating to the Islamic period. The cemetery is situated on the top of a natural rise west of the Varkāb-Durak track. The general sign of graves in this burial area is a jumble of rock rubble found scattered on the surface. The orientation of the graves is not clear, and most of the graves are buried under a layer of fine alluvial sediment. There have been illegal excavations conducted here and much of the stone grave lining and bones from the graves are disturbed and visible. No epigraphic or ceramic evidence was found on the surface of the graves, but it is considered probable that the burial ground dates to the Islamic period.

Islamic era buildings were identified at the Ghaleh Ātashgāh (Ātashgāh Fort) site (Kh3-4). Due to multiple phases of destruction and rebuilding by villagers as well as continued use, the fort cannot be dated with any degree of certainty; however, the materials employed in its construction indicate it was probably erected in the later Islamic period.

Among other Islamic period sites identified were eight watermills (Kh3-5, Kh3-10, Kh3-12, Kh3-16, Kh3-23, Kh3-24, Kh3-25, and Kh3-26). These mills were mostly built beside the river or located near springs adjacent to the river alongside agricultural fields (Fig. 24). They have, to a

great extent, been destroyed, although surviving elements include drop-towers and parts of the canals. No artefacts were found which could date these structures more precisely; however, the technical features and newness of the construction material indicates they can be attributed to the later Islamic period. A number of these gristmills were reportedly in use up until 25 years ago.

In the course of the survey, an Islamic shrine (*Imamzādeh*) known locally as the Shrine of Imam ‘Adnān, was also identified (Kh3-14). This shrine has a small domed roof on a square plan and was built in recent decades.

### The Current Model of Settlement Patterns in the Region and an Alternative

The eminent archaeologist of southwestern Iran Abbas Alizadeh writes:

The evidence of long-term nomad-farmer interaction in southwestern Iran is at present very limited. This dearth of evidence seems to have resulted in part from the difficulties of conducting long-term archaeological investigations in the mountains but more importantly from the lack of specific models that would encourage and guide goal-oriented research in the region.<sup>40</sup>

The model which Alizadeh himself provides offers an appropriate analytical framework for helping to understand the newly obtained hydro survey data and refining the goals of future surveys and supporting excavations. The “dearth of archaeological investigations in the mountains” to which he refers is an important gap in the Iranian archaeological record, but one that is being filled piecemeal by archaeological surveys such as the present one. Much of this data-gathering work remains unpublished and, as yet, has not been integrated to yield nuanced insights into settlement patterns in the highland regions.

Alizadeh’s theoretical model of state-formation in the Zagros Highlands takes some of its own inspiration from Alan Zagarell’s work,<sup>41</sup> and is backed by anthropological and historical evidence. However, the model is underpinned by an inductively developed theory of the history and evolution of settlement patterns — not yet fully documented archaeologically — based on inferences drawn from the region’s geomorphologic and climatic conditions. Briefly stated, the theory runs that following the initial domestication of herd animals, especially goats and sheep, sometime in the Epipalaeolithic-Early Neolithic (*ca.* 9000–7000 BCE), hot summers and cold winters, combined with steep valleys without large flat arable plains, forced human groups to adopt, over time, a bivalent or “dimorphic” pastoral nomadic/sedentary agricultural way of life in order to make the most of the resources of the region across the seasonal cycle. Kamyar Abdi dates the full maturation of this nomadic-pastoralist way of life to between the Middle Chalcolithic and the Early Bronze Age (*ca.* 4500–3500 BCE) in the Central Zagros.<sup>42</sup> This adaptive survival strategy, in the absence of war, resulted in a relatively stable patchwork of small village settlements in the river valleys in the folding zone. They were inhabited during the winter months but substantially abandoned during the summer months, when the residents took their tents and flocks up to highland pastures. Gradually, some groups came to maintain a more mobile way of life, while

<sup>40</sup> Alizadeh 2010, p. 360.

<sup>41</sup> Zagarell 1982.

<sup>42</sup> Abdi 2003, p. 397.

others with the same tribal or broader cultural affiliations, became more fully sedentarised. This means of production (and mode of subsistence) differentiation could produce both symbiotic relations between the nomads and the sedentary populations and more predatory extractive patterns of interaction. In either case, the essential point is that all groups were part of a single stable socio-economic/cultural ecology. Alizadeh suggests the mobile pastoralist leadership was usually able to assume a dominant political role in southwestern Iran because of the tactical flexibility its mobility gave it. Thus the system was “enclosing” in character, rather than “enclosed”.<sup>43</sup>

However, as Philip Salzman reminds us, “nomadization and sedentarization have been ongoing, complementary processes for millennia. Quite frequently, individuals, families, or lineages shifted between a nomadic and a sedentary life, and back depending upon circumstances.”<sup>44</sup> This is a point that is acknowledged by Alizādeh in his concept of “desettlement” (*contra* “depopulation”), but perhaps not emphasised by him sufficiently, given the important implications it may have for our understanding of the archaeological record in the Zagros Mountains. We may assume that periods of sedentarisation will be accompanied by changes in the character of the cultural material those settlement phases leave in the archaeological record. Specifically, we should perhaps expect to see evidence of slightly greater socio-economic complexity, such as a richer material culture, including more elaborate interment practices and grave architecture. By contrast, phases of desettlement may result in a concomitant decline in signs of socio-economic complexity. This conception of iterative, relatively routine sedentarisation-desettlement oscillations in the Zagros region may be helpful for understanding hitherto hard-to-explain phenomena in the archaeological record. It may even suggest that the sedentisation-nomadisation debate presents a false dichotomy. For example, Abdi’s wide-ranging study of prehistoric settlement patterns in areas of the Central Zagros has tracked a period of sedentisation in the late Neolithic to Early Chalcolithic, followed by a period of “either emigration, increased mortality,” or adoption of a more mobile way of life (desettlement) in the Late Chalcolithic.<sup>45</sup> He reports that “the ceramics and other aspects of material culture changed abruptly between these two phases.”<sup>46</sup> Over a longer time period, settlement pattern data would perhaps reveal cycles of re-sedentisation, followed by desettlement again.

An extreme example might be the large rich cemeteries of the early to mid-Iron Age “Luristan Bronzes” phase in the Central Zagros region. There is still no epigraphic evidence for this phase, despite a wealth of circumstantial material suggesting it should have been produced by a settled culture.<sup>47</sup> The Chalcolithic cemeteries at Hakalan and Parchineh have also been proposed to be

<sup>43</sup> Alizadeh 2010, pp. 353–360.

<sup>44</sup> Salzman 2002, p. 256. Thus, what we may be seeing in this mid-second millennium BCE Zagros cultural phase is possible evidence of a particularly strong period of sedentisation, although we still lack settlement sites.

<sup>45</sup> Abdi 2003, p. 431.

<sup>46</sup> Abdi 2003, p. 432.

<sup>47</sup> Oscar Muscarella (2009) writes: “Even the settlement patterns in Bronze and Iron Age Luristan, whether sedentary or wholly or partially nomadic, are unknown. Presumably the complex economic and technical structures embodied in the flourishing Iron Age bronze industry would argue for a partly sedentary population (Frye 1963: 59f.), but without texts scholars are not in a position to explore the dynamics of manufacturing: how copper and tin were obtained and how payments, transport, design, and production were organized. Furthermore, without excavated settlements there is no evidence bearing on distribution and administrative centers, so that no focused perception of a political system or systems is possible.”



the product of migrating mobile pastoralists.<sup>48</sup> There are a number of objections to interpreting these cemeteries as (exclusively) the product of nomadic pastoralists. Not least, there is the practical question of large numbers of migrating people (over 1000 graves in the case of Parchineh) dying and being interred, sometimes with some ceremony, at what is only roughly a midpoint on present-day migration routes, even if the cemetery was used over several centuries. In short, migrating groups would be logically expected to have spent only very short periods of time in such places. Did Chalcolithic nomads in the Central Zagros preserve the bodies of their dead for days, or perhaps in some cases weeks, so that they could be transported to and buried at a particular sacred place midway along their migration route? As Abdi argues fluently, this may have occurred.<sup>49</sup> Nevertheless, this uncertainty, along with other contradictory evidence mentioned by Abdi, serves to emphasise that prehistoric cemeteries in the Zagros may still provide more questions than answers when it comes to what inferences we can draw from them about sedentary versus nomadic settlement patterns. Another concern is that if the system was politically nomad-dominant and “enclosing” rather than settled community-dominant and “enclosed”, would the pastoralists not have been freer to bury their dead anywhere they chose, rather than in a remote place away from settled communities?

The possibility that the Luristan Bronzes cultural phase, for example, may represent a sedentary phase in a relatively regular long-duration pattern of sedentarisation-desettlement oscillations enacted by an essentially mobile pastoralist culture should prompt archaeologists to remain alert to the likelihood that evidence of similar, though spatially and temporally distinct, phenomena may be present in other parts of the highland Zagros region.<sup>50</sup> Excavations that flow from the new hydro-dam salvage archaeological surveys may be able to add nuance and resolve questions still outstanding concerning this mobile pastoralist theoretical model. They may also help document the evolution and relative stability of this way of life, different cultural phases, population shifts and regional variation across different zones within the Zagros Mountains. The newly discovered cemeteries in the Khersān 3 zone may be particularly significant for this purpose.

The idea suggested here — of relatively routine sedentarisation-desettlement oscillations of varying lengths of time — is more compatible with the dimorphic mobile-pastoralist system described by Alizadeh. In theoretical terms, earlier scholars of pastoralism and nomadism proposed a single shift from sedentary village-based herding.<sup>51</sup> Abdi proposes a more nuanced, though still linear set of intermediate steps from village-based herding to nomadic pastoralism, whereupon a relatively stable way of life and alternative means of production can be said to have been established.<sup>52</sup> The model suggested here, based on a still tentative re-reading of the cemeteries being uncovered in the Zagros, is the iterative one implied by Salzman. It may indicate that even family units engaged in settled agriculture for a number of generations could, if needs dictated, have

<sup>48</sup> Haerincx and Overlaet 1996; Vanden Berghe 1973a and 1973b; 1975. No settlement sites have yet been persuasively associated with the Hakalan and Parchineh cemeteries either.

<sup>49</sup> Abdi 2003, pp. 433–434.

<sup>50</sup> The debate and doubts about “nomadism” versus “sedentism” patterns in Luristan during the Bronze Age (and by implication the early Iron Age) is summarised in Potts 2013b, p. 212.

<sup>51</sup> Such as Gilbert 1983; Henrickson 1985; Hole 1978; Lees and Bates 1974. Mentioned by Abdi 2003.

<sup>52</sup> Abdi 2003 p. 397.



rejoined or embarked on a seasonal pastoralist highland-lowland migration with few cultural or social barriers. This idea needs further testing, but it would fit Alizadeh's model and suggests an alternative explanation for some elements of the archaeological record.

### Findings of the Khersan 3 Archaeological Survey

The chronology for the 30 sites identified is based on diagnostic ceramic finds and architectural evidence. Most of the sites were found atop and on the sides of low natural hills around the river (Table 1). Indeed, these locations are the only areas conducive to small-scale settlement in this plain-less region. The poverty of flat land means that virtually all of the sites that may have been most favourable to permanent settlements in, for example, the second millennium BCE, are occupied, built on and/or extensively cultivated today. This situation makes negotiating access for archaeologists more complex.<sup>53</sup> The Khersān River and its tributary the Beshār (or Garm) had an important role in the establishment of settlements through all periods. Most of the habitation sites identified so far do not have notable archaeological deposits and are usually single phase. It appears that sites in the particularly rugged middle section of the Khersān 3 reservoir area were used only seasonally. Archaeological evidence from them includes a scatter of pottery on steep slopes.

The archaeological survey found that the southeastern half (upstream) had higher concentrations of population than the northwestern half, both today and in former times, due to easier entry and egress and relatively greater areas of cultivatable land available around the river. Our findings suggest that the first human groups settled in the region sometime in the Middle and New Susiana periods in the sixth and fourth millennia BCE. We have not yet found any evidence of Palaeolithic or Epipalaeolithic occupation.

Settlement material from a Susiana-phase culture (Khuzestān) has been found at the Dingu 1 site, on the natural terrace above the river. Surface finds indicate the presence of architectural remains at this site. The inhabitants had a pottery industry characterised by fine wares with a clayed temper. The external and internal surfaces of some of these vessels were covered by red clay slips of varying degrees of thickness. It is still unclear whether this is evidence of a group of people that migrated into this area seasonally, in spring, or a more permanently settled community which engaged in village-based herding. The habitation sites were on the banks of the river on the small areas of cultivatable land, allowing us to infer the residents may have cultivated crops during their permanent or seasonal occupation. Caution is required because, as mentioned earlier, if this is interpreted as indicating the presence of mobile pastoralists, it would be among the earliest evidence for that settlement pattern and mode of production in the Zagros Highlands.<sup>54</sup> Needless to say, further work is needed to establish the exact nature of this late sixth millennium BCE occupation phase.

<sup>53</sup> This may be why we find cultural material more suggestive of sedentary phases, but as in Lurestan, remain confronted with a dearth of actual contemporary settlement sites.

<sup>54</sup> Alizadeh 2003, p. 85. Kamyār Abdi (2003, pp. 396–397) suggests a date for the start of mobile pastoralism in the Zagros of between “6500–5500 BP”; that is, 4500–3500 BCE. However, he remarks that “While there is a consensus among archaeologists that the Zagros Mountains was one of several regions where nomadic pastoralism first emerged, estimates on the date when this took place range from the Neolithic (Hole, 1977; Mortensen, 1972; Zagarell, 1975) to the Late Chalcolithic (Henrickson, 1985).”

No cultural material securely attributable to phases between the New Susiana period and the third millennium BCE was found in the course of the Khersān 3 survey. This is not easy to accept, but we still only have a very limited understanding of the ceramic chronology in this region. Also, few other studies of those periods have been conducted, or if they have, they have not been published. The gaps may also be due to the relatively restricted scope of the area surveyed. In addition, a number of sites are on steep slopes, and sediments eroded and washed down from the piedmont may have buried a number of sites so effectively that they were not visible to our surface investigators. This was the case with the Deh Pāyeen cemetery which was missed by the initial survey and only discovered incidentally during follow-up excavations.<sup>55</sup>

From the end of the third millennium to the mid- to late second millennium BCE we find evidence of an important new cultural phase, distinguished by one primary diagnostic characteristic: the building of large cemeteries on the slopes of low natural hills. It was at Lamā, beside the Beshar River in the very upper end of the Khersān 3 reservoir area, that a cemetery of this culture was identified for the first time, in 2000. Five seasons of excavations followed in 2001, 2007, 2008, 2009 and 2010.<sup>56</sup> An osteo-archaeological study has recently been concluded by the Polish scholar Arkadiusz Sołtysiak of bones recovered during the 2008–2010 excavation of the Lamā cemetery.<sup>57</sup> The cemetery has a provisional absolute dating of 1652–1492 bc (the Bronze Age–Iron Age transition).<sup>58</sup> Sołtysiak concludes there is a high probability that individuals buried there led a “nomadic-pastoralist” way of life, based on skeletal evidence of high general levels of mobility and low intakes of fermentable sugars, with high levels of consumption of animal products. His observation regarding the evidence of high general levels of mobility appears to apply specifically to the male skeletons rather than all skeletons.<sup>59</sup> This leaves the question open of just how “mobile” or sedentary the community as a whole was, and whether there is, in fact, enough evidence yet to justify the conclusion that the individuals in the graves led a predominantly mobile pastoralist lifestyle.

In more recent years another of these cemeteries was discovered at Taj Amir near Yāsuj, Kohgilūye-o Büyer-Ahmad’s provincial capital.<sup>60</sup> To date, no permanent settlement site or seasonal habitation site has been found that can be verifiably associated with the culture to which the cemetery belongs — the same odd absence that afflicts attempts to understand the Iron Age Luristan Bronzes cultural phase in the Central Zagros. Abdi and Alizadeh have elsewhere interpreted cemeteries in the absence of settlements (alongside other evidence) as indicating their use by mobile pastoralists, specifically in relation to the cemeteries at Hakalān and Parchineh in the Central Zagros, dated to the Chalcolithic period. Consequently, despite the relatively elaborate nature of the burials at Lamā, and possibly at Deh Pāyeen and Sarsur, suggesting a comparatively high degree of socio-economic complexity, current thinking in Iran is that communities that produced this cultural phase were probably still mobile pastoralists.<sup>61</sup>

<sup>55</sup> In fact, all of the newly discovered cemeteries in Kohgilūye-o Büyer-Ahmad province were found accidentally as a result of road-making and construction activities or illegal excavations by antiquities looters. None were visible on the surface and, as a result, they are susceptible to being overlooked during archaeological surveys.

<sup>56</sup> Razvāni *et al.* 1386/2007; Jafari 2010.

<sup>57</sup> Sołtysiak 2013.

<sup>58</sup> Roustāei and Āzādi 2011, p. 200 n. 5.

<sup>59</sup> Sołtysiak *et al.* 2010.

<sup>60</sup> Ghezelbāsh and Jafari 2012.

<sup>61</sup> Alizadeh 2003, p. 85.

The Lamā type of cemetery has only been documented from Kohgilūye-o Būyer-Ahmad and close adjacent regions, which indicates the associated culture had a restricted range, limited to this section of the Southern Zagros Mountains. Finds from these cemeteries have given us a relatively good understanding of burial practices, the customs and the way of life of members of this culture. Lab testing done on bones from the Lamā cemetery has given a provisional absolute dating of between 1625 and 1492 bc.<sup>62</sup> This dating should not yet be considered final, but it does allow us to start thinking about how this phase might fit in with what was going on in the wider region at this important, though mysterious juncture.

No fewer than two Bronze Age or early Iron Age cemeteries (Deh Pāyeen and Sarsour) have been identified in the Khersān 3 reservoir area, along with the Lama Cemetery, which can also be attributed to this cultural phase. All three cemeteries are sited on the slopes of low earth hills around the river, the most extensive being Deh Pāyeen, which has recently been raided by antiquities looters. Evidence from the area of the Beshār River and the upper reaches of the Khersān suggests other cemeteries of this type may exist, buried under natural alluvium deposited over millennia. The presence of the three cemeteries also suggests there was a significant population increase in this area of the Southern Zagros Highlands in the late third to early/mid-second millennia BCE. Of course, this could equally be evidence of a sedentarisation phase rather than increased population *per se*. Future archaeological studies will need to be conducted to flesh out the story of this apparently important cultural phase in the Southern Zagros, which may also straddle the Bronze Age-Iron Age transition.

The map of the distribution of the sites, coded for period, reveals that the number of sites increased during the historical period (*ca.* 550 BCE–650 CE) (Figs 11, 12). The density of these sites also increases in the upstream sector, around the periphery of the reservoir where it extends up the Beshār River valley. This may be connected to environmental changes and the existence of new communications routes. The archaeological data for these sites includes a scatter of pottery and limited architectural remains.

The number of sites again increased through the Islamic period across the whole survey area, documenting a process of gradually intensifying occupation/settlement. As with historical-period sites, they are usually located atop high points and on the slopes of the natural hills and rises around the river, places that are, not coincidentally, also the locations of modern villages. None, with the exception of Qaleh Deh Pāyeen, appear to have deep archaeological deposits. More than half have been identified on the basis of a scatter of painted potsherds alone, which suggests the inhabitants

<sup>62</sup> Roustāei and Āzādi 2011, p. 200 n. 5; Sołtysiak 2013. At Deh Payeen, the cemetery was very disturbed as a result of modern development activities and looters' excavations. The graves are under a layer of sediment and redeposited material, between 50 cm and 2 m thick. Their construction began with the excavation of a grave cavity which was then lined with cobblestones, stone rubble or boulders sourced locally. The graves were then covered with large flagstones laid horizontally across the top forming the roof. At Lamā, most of the grave roofs were formed into a sloping gable. The majority have a rectangular plan, although circular and oval plans have also been found. The interior space ranges between 90 and 150 cm in length, 50 to 70 cm in height, and about 70 cm in width. Following interment, both decorative and practical grave goods were often laid around the body. Based on the limited amount of evidence we have, they were crouched burials, with some graves reopened periodically to receive a new interment. Existing bones were laid or stacked to the side. The most important grave goods found include pins, bangles, broaches, clasps, bracelets, earrings, arrowheads, spearheads, axes, swords, knives, vessels, handled pitchers, other ceramic vessels and rings. In addition to the human remains, equine and ovicaprid bones were found in some graves.

were mobile pastorals who only occupied the sites intermittently or seasonally. The architectural features at these sites include a limited number of stone structures, characterised by walls constructed of rough courses of stone. These structures are all but identical to those still in use today by the increasingly sedentarised, formerly mobile pastoralist communities (Fig. 22; Table 5).

## Conclusion

This survey was able to trace over 6000 years of human activity inside the area of the proposed Khersān 3 Dam reservoir. In the absence of further excavations, we cannot claim to have fully documented all cultural phases and processes in the region or even to have scratched the surface. As with any intensive survey, the lack of Palaeolithic finds, for instance, should not be taken as evidence of absence. However, large cemeteries were identified, which add to an emerging body of evidence supporting the contention that an important cultural phase, unique to this area of the Southern Zagros folding zone, existed (perhaps) between the late Bronze Age and early Iron Age. Considerable further insight into this cultural phase may be gained from the diversity of cultural materials interred with the human remains. Surface finds, together with excavations at Lamā and Tāj Amir, have turned up a wide range of relatively sophisticated grave objects. The tentative speculation we have made in this paper, based on these finds, is more for the benefit of framing future research programmes and excavation aims than for making any claims to discovery or major insight. A relevant question for future research is why we find cemeteries of impressive size, with comparatively elaborate graves, yet to date have found no settlement sites verifiably associated with them. In many other cultural contexts, the sophistication of the grave architecture (gable-roofed), and the diversity of the grave objects might suggest a sedentised and socio-economically complex cultural phase. The nature of this phase, and whether it is part of a long-duration pattern of relatively routine sedentarisation-desettlement oscillations within an essentially mobile pastoralist socio-economic context in the Southern Zagros, is an important question for future research. More carbon dating is also required to strengthen the initial indicative dating obtained by Razvāni *et al.* and Sołtisiak from Lamā.

An analysis of the map plotting the distribution of habitation sites reveals that the population and number of settlements increased in the medieval and later Islamic periods. Painted ceramic sherds are visible on the surface of most of the later settlement sites, indicating Islamic period mobile pastoralist societies of the region were familiar with the painted pottery-making tradition (pseudo-prehistoric ceramics) of Fārs, Chahārmahāl-o Bakhtiārī and Kohgilūye-o Būyer-Ahmad provinces.

The mountainous character of the region and other environmental conditions such as the existence of fertile grazing uplands make the region suitable for migratory societies, the cultural remains of which have been identified at the sites in the Khersān 3 Dam reservoir area. This pattern is supported by the present-day density of tribal settlements around the river, on the piedmont and on the steep sides of earth hills and rises, beside springs, together with the often single-phase nature of many of the sites surveyed. In addition to the settlement sites, a number of architectural features including sites of water-driven drop-tower gristmills, a cemetery, a fort and a shrine dating to the Islamic period were identified.

It is hoped that the data from the Khersan 3 survey can be used alongside data from Iran's many other recent hydro surveys, to craft new insights into the full record of settlement patterns in these under-studied highland Zagros Mountain regions and, possibly, into how cultural developments therein affected surrounding regions in significant ways.

## Bibliography

- Abdi, K.  
2003 "The early development of pastoralism in the central Zagros Mountains," *Journal of World Prehistory* 17: 395–448.
- Alizādeh, A.  
1373/1994 *Prehistoric Pottery from the Area of the Kur River Basin in the Pottery Bank of the Museum of Ancient History of Iran*. Unpublished report. (In Persian)  
2003 "Some observations based on the nomadic character of Fars prehistoric cultural development," in *Yeki Bud Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 83–97. Los Angeles: Cotsen Institute of Archaeology, University of California.  
1383/2004 *The Origins of Prehistoric Administrative Institutions of Fārs: Tell-e Bākun, Ancient Nomadism and the Formation of the First States*. Translated by K. Roustāei. Persepolis: Parseh-Pasargadae Research Foundation. (In Persian)  
1387/2008a *The Formation of Mountainous Tribal States in Ancient Elam*. Sāzmān-e Meiras-e Farhangi va Gardeshgari (ICHTO) of Chahār Mahāl o Bakhti-yāri. (In Persian)  
2008b *Chogha Mish 2: The Development of a Prehistoric Regional Center in Lowland Susiana, South-western Iran: Final Report on the Last Six Seasons of Excavations 1972–1978*. Chicago: Oriental Institute of the University of Chicago.  
2010 "The rise of the highland Elamite state in southwestern Iran: 'Enclosed' or enclosing nomadism?," *Current Anthropology* 51: 353–383.
- Āzādi, A.  
1386/2007 "Archaeological survey of the Likak Bahma'i region of Kohgiluyeh," in *Nāmeḥ-ye Pazhuheshgāh* 20–21: 105–120. (In Persian)  
1388/2009 *Report of the Second Season of the Archaeological Survey of the Kohgiluyeh Area (Nov.-Dec. 2008)*, Tehran: Iranian Center for Archaeological Research. (In Persian, Unpublished)
- Badi'ei, R.  
1378/1999 *Detailed Geography of Iran: Economic Geography*. Vol. 3. Tehran: Eghbāl. (In Persian)
- Bayāt, A.  
1379/2000 *The Geographical, Natural and Historical Essentials of Iran*. Tehran: Mo'asese-ye Enteshārāt-e Amir Kabir. (In Persian)
- Carter, E. and Stolper, M. W.  
1984 *Elam: Surveys of Political History and Archaeology*. Berkley: University of California Press.
- Conard, N. J., Ghasidian, E., Heydari, S. and Zaidee, M.  
2005 *Report on the 2005 Survey of the Tubingen-Iranian Stone Age Research Project in the Provinces of Esfahan, Fars and Koubkiloyeh and Boyer Ahmad*. Unpublished report. Tehran: Institute of Archaeology, Iranian Cultural Heritage Organisation.



- Delougaz, P. and Kantor, H. J.  
1996 *Chogha Mish 1: The First Five Season of Excavations, 1961–1971*. Chicago: The Oriental Institute of the University of Chicago.
- Frye, R. N.  
1963 *The Heritage of Persia: The Pre-Islamic History of One of the World's Great Civilizations*. New York: World Publishing Company.
- Ghāsemi, P.  
1387/2008 *Report on the Archaeological Survey of the Area of the Khersān 2 Hydro-electric Dam*. Unpublished report. Tehran: Iranian Center for Archaeological Research.  
2008 *Report on the Archaeological Survey of the Area of the Khersān 2 Hydro-electric Dam*. Unpublished report. Tehran: Pazhuheshkadeh-ye Bāstānshenāsi.  
2012 "Results from archaeological survey in Dam Khersān II area," in *Namvarnameh: Papers in Honour of Massoud Azarnoush*, edited by K. Alizadeh and H. Fahimi, pp. 227–241. Tehran: Iran Negar Publications.  
2012 *Report on the Archaeological Survey of the Area of the Behesht Abad Hydro-electric Dam*. Unpublished report. Tehran: Iranian Center for Archaeological Research.
- Ghezelbāsh E. and Jafari, M. J.  
2012 *First Season Report of Excavation at Taj Amir Yasouj Cemetery*. Unpublished report. Tehran: Iranian Center for Archaeological Research. (In Persian)
- Gilbert, A. S.  
1983 "On the origins of specialized nomadic pastoralism in western Iran," *World Archaeology* 15: 105–119.
- Haerinck, Ernie  
1376/1997 *La Céramique en Iran Pendant la Période Parthe (ca. 250 av. J. C. à ca. 225 après J. C.): Typologie, Chronologie et distribution*. Tehran: Sazman-e Meirās-e Farhangi-ye Keshvar. (Persian translation)
- Haerinck, E. and Overlaet, B.  
1996 *The Chalcolithic Period Parchineh and Hakalan: Luristan Excavation Documents I*. Brussels: Royal Museum of Art and History. (In French)
- Heidari, A.  
1377 [1998] "The Elimaean relief on the Jangeh Bordguri," *Majāleh-ye Meiras-e Farhangi* 18: 204–208. (In Persian)
- Henrickson, E. F.  
1985 "The early development of pastoralism in the central Zagros highlands (Luristan)," *Iranica Antiqua* 20: 1–42.
- Hole, F.  
1977 *Studies in the Archaeological History of the Deh Luran Plain: The Excavation of Chogha Sefid* (Memoirs of the Museum of Anthropology, University of Michigan, 9). Ann Arbor: University of Michigan Press.  
1978 "Pastoral nomadism in Western Iran," in *Explorations in Ethnoarchaeology*, edited by R. A. Gould, pp. 127–167. Albuquerque: University of New Mexico Press.

- Jafari, M. J.  
2010 *Report of the Third Season of Excavations at Lama Cemetery*. Unpublished report. Tehran: Iranian Center for Archaeological Research. (In Persian)
- Khosrozādeh, A.  
1386 [2007] *Report of the Archaeological Survey of the Fārsān District*. Unpublished report. Tehran: Pazhuheshkadeh-ye Bāstānshenāsi. (In Persian)
- Krešić, N. and Stevanović, Z.  
2009 *Groundwater Hydrology of Springs: Engineering, Theory, Management, and Sustainability*. Burlington, MA: Butterworth-Heinemann.
- Lees, S. H. and Bates, D. G.  
1974 "The origins of specialized nomadic pastoralism: A systemic model," *American Antiquity* 39: 187–193.
- Miroschedji, P. de  
1987 "Fouilles du chantier Ville Royal II a Suse (1975-1977)," *Cahiers de la Delegation Archeologique Francaise en Iran (DAFI)* 15: 11–143. (In French)
- Moghaddam, A.  
2012 "Southwestern Iran," in *A Companion to the Archaeology of the Ancient Near East*, edited by D. T. Potts, pp. 512–530. Oxford: Blackwell Publishing Ltd.
- Mortensen, P.  
1972 "Seasonal camps and early villages in the Zagros," in *Man, Settlement and Urbanism*, edited by P. Ucko, R. Tringham, and G. W. Dimbleby, pp. 293–297. London: Duckworth.
- Muscarella, O. W.  
1989 "Bronzes of Luristan," in *Encyclopaedia Iranica* <http://www.iranicaonline.org/articles/bronzes-of-luristan> (4 August 2013)
- Nissen, H. R.  
1972 "The Behbehān plain in the 5th millennium B.C.," in *Proceedings of the VIth International Congress Of Iranian Art And Archaeology*, edited by M. Y. Kiani, pp. 273–279. Tehran: Iranian Center for Archaeological Research.
- Nissen, H. and Zagarell, A.  
1975 "Expedition to the Zagros Mountains," in *Proceedings of the IVth Annual Symposium on Archaeological Research in Iran*, edited by Firuz Bāgherzādeh, pp. 159–189. Tehran: Iranian Center for Archaeological Research.
- Nouruzi, A.-A.  
1385 [2006] *Report on the Archaeological Survey of the Reservoir Area of the Kārun 4 Hydro-electric Power Scheme*. Unpublished report. Tehran: Iranian Center for Archaeological Research.
- Potts, D. T.  
1999 *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge: Cambridge University Press.

- 2013a "In the shadow of Kurangun: Cultural developments in the highlands between Khuzestan and Anšan," in *Susa and Elam: Archaeological, Philological, Historical and Geographical Perspectives, Proceedings of the International Congress Held at Ghent University December 14–17, 2009*, edited by K. de Graef and J. Tavernier, pp. 129–137. Leiden: Brill.
- 2013b "Luristan and the Central Zagros in the Bronze Age," in *The Oxford Handbook of Ancient Iran*, edited by D. T. Potts, pp. 203–216. Oxford: Oxford University Press.
- Potts, D. T., Roustaei, K., Petrie, C. A. and Weeks, L. R.  
2009 *The Mamasani Archaeological Project, Stage One: A Report On The First Two Seasons of the ICAR-University of Sydney Expedition to the Mamasani District, Fars Province, Iran*. Oxford: Archaeopress.
- Rezvāni, H., Roustāei, K., Āzādi, A. and Ghezelbāsh, E.  
1386 [2007] *Final Report of the Archaeological Excavations at Lamā Cemetery (Yāsuj – Kohgilūye-o Būyer-Ahmad)* (Archaeological Reports, 12). Tehran: Iranian Center for Archaeological Research.
- Roustāei, K.  
1386/2007 *Report of the Archaeological Survey of the Kohrang District (First Season)*. Unpublished report. Tehran: Iranian Center for Archaeological Research.
- Roustāei, K. and Āzādi, A.  
2011 "Discovery of a Parthian tomb chamber in Cheram, Kohgiluyeh, SW Iran," *Iranica Antiqua* 46: 193–206.
- Salzman, P. C.  
2002 "Pastoral nomads: Some general observations based on research in Iran," *Journal of Anthropological Research* 58: 245–264.
- Stronach, D.  
1379 [2000] *Pasargadae: A Report on the Excavations Conducted by the British Institute of Iranian Studies (from 1961 to 1963)*. Translated by H. K. Shahidi. Tehran: Meirās-e Farhangi.
- Sołtysiak, A.  
2013 "Report on selected human remains from Lama, Southern Zagros, Iran," *Iranica Antiqua* 48: 77–101.
- Sołtysiak, A., Jafari, M. J. and Rajabi, N.  
2010 "Short fieldwork report: Lama and Tol-e-Khosrow (Iran): Seasons 2008–2010," *Bioarchaeology of the Near East* 4: 63–69.
- Vanden Bergh, L.  
1973a "Pusht-i Kuh, Luristan," *Iran* 11: 207–209.  
1973b "La N'ecropole de Hakalan," *Archéologia* 57: 49–58. (In French)  
1975 "La N'ecropole de Dum Gar Parchineh," *Archéologia* 79: 46–61. (In French)
- Whitcomb, D.  
1985 *Before the Roses and Nightingales: Excavation at Qasr-I Abu Nasr, Old Shiraz*. New York: Metropolitan Museum of Art.  
1991 "Pseudo-prehistoric ceramics from Southern Iran," in *Golf-Archäologie: Mesopotamien, Iran, Kuwait, Bahrain, Vereinigte Arabische Emirate und Oman*, edited by K. Schippman, A. Herling and J.-F. Salles, pp. 95–112. Internationale Archäologie, 6: Leidorf.

Zagarell, Alan

- 1975 "Archaeological survey in the north west Bakhtiari Mountains," in *Proceedings of the 2nd Annual Symposium on Archaeological Research in Iran*, edited by F. Bagherzadeh, pp. 145–148. Tehran: Iranian Center for Archaeological Research.
- 1982 *The Prehistory of the Northeast Bakhtiyari Mountains, Iran: The Rise of a Highland Way of Life* (Beihefte zum Tübinger Atlas des Vorderen Orients 42). Wiesbaden: Ludwig Reichert Verlag.

Parsa GHASEMI

Kohan Diyār-e Mehr Archaeological Institute, Shiraz, Iran

E-mail: [parsa.ghassemi@gmail.com](mailto:parsa.ghassemi@gmail.com)

Greg WATSON

Waikato University, New Zealand

E-mail: [gregknwatson@gmail.com](mailto:gregknwatson@gmail.com)

# The Hypogeum of Tell Ahmar (North Syria). An Analysis of the Monumental Burial Complex in the Context of Early Bronze Age Funerary Practices

Cristina BACCARIN

## Abstract

*At Tell Ahmar, in the Syrian Euphrates Valley, an impressive stone-built hypogeum testifies to the importance of funerary traditions in the riverine region during the second part of the third millennium BC. The tomb represents one of the better examples of funerary, chamber-based construction, a new type of burial widespread in the Middle Euphrates Valley starting from the Early Bronze Age. More recent excavations have provided additional information on its architecture, lifespan and social role in the community. Based on the new data, this paper offers an innovative analysis and interpretation of the funerary complex.\**

## Introduction

From the very end of the fourth millennium and during the entire third millennium BC, the funerary traditions in the region of the Euphrates River Valley evolved from graves commonly containing a single deposition with a plain structure into more complex tombs with two or more depositions and a more developed structure. In this historical context the introduction of a new type of burial, identified as “chamber tomb”, which spread through both Syrian and Anatolian stretches of the Euphrates Valley during the Early Bronze Age, should be noted. This type of burial was characterised by its large dimensions, an elaborate structure in stone masonry, remarkable grave goods, and its prominent position in highly visible locations. The introduction of this elaborate type of grave was associated with the emergence of a more complex society and was specifically commissioned by a new, powerful elite. Through the construction of monumental tombs the rich families who exerted control over the local communities emphasised their power and legitimised their status by preserving the importance of the tomb over a long period of time.<sup>1</sup>

\* I would like to warmly thank Dr Guy Bunnens, director of the Tell Ahmar excavations, and his wife, Dr Arlette Roobaert-Bunnens, for offering me the opportunity to undertake the analysis of the Hypogeum complex as the main subject of my PhD dissertation at the University of Turin.

<sup>1</sup> For the social function of the monumental tombs see Peltenburg 2009 and Porter 2002a; 2002b.



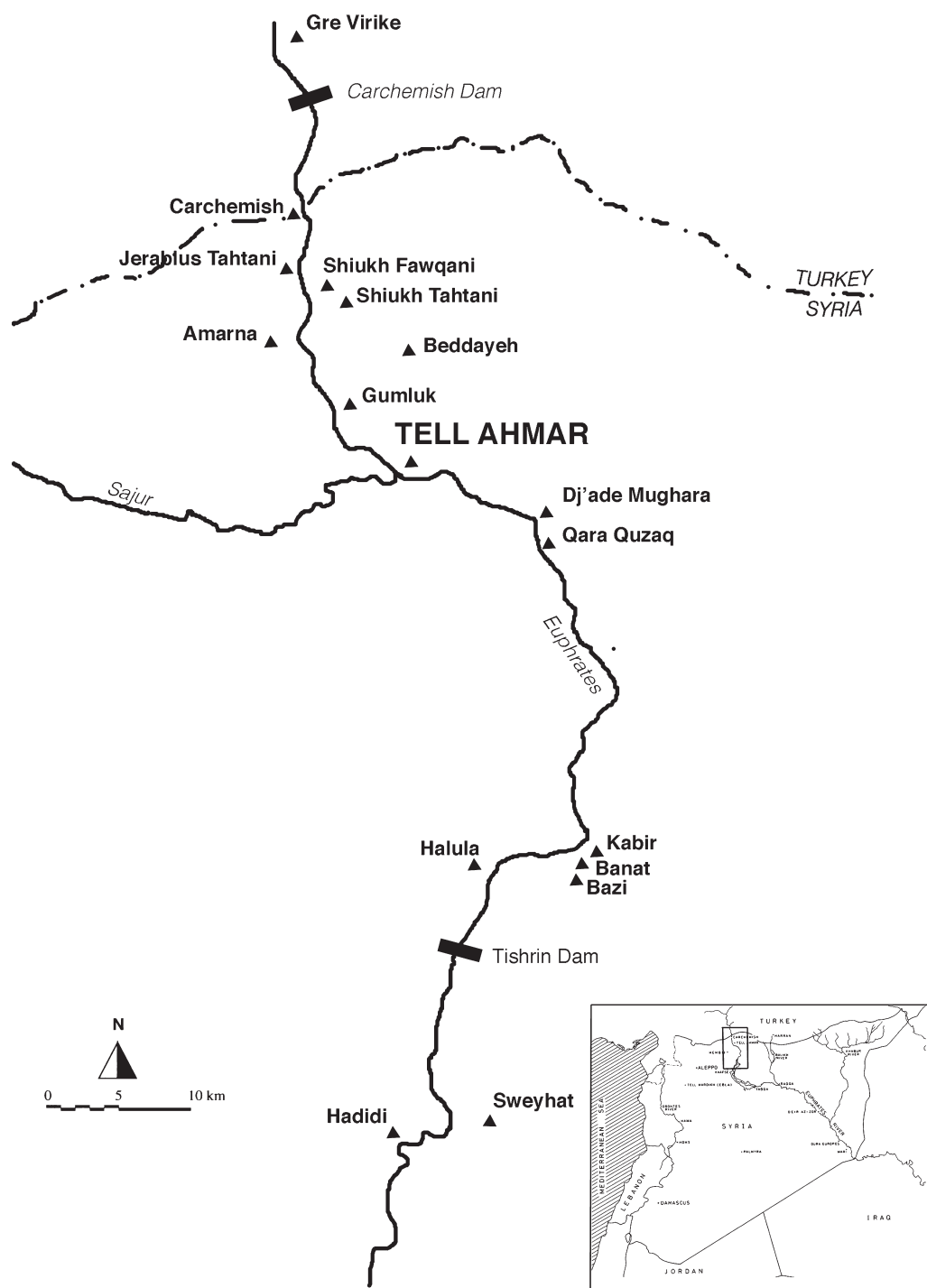


Fig. 1. Map showing the location of Tell Ahmar and the Tishrin region.

One of the better examples of chamber tomb construction, the so-called Hypogeum at Tell Ahmar, was discovered in Syria and dated to the Early Bronze Age (Fig. 1). This Hypogeum is one of the most important monumental tombs in the Euphrates Valley and is a good illustration of the evolution of funerary traditions in the region during the third millennium BC. The Hypogeum was excavated in the 1930s by the French archaeologists F. Thureau-Dangin and M. Dunand, who were the first to excavate at Tell Ahmar.<sup>2</sup> According to Dunand, during the excavation of the so-called Aramaean level, the collapse of one of the large slabs covering the tomb brought about its discovery.<sup>3</sup>

After new excavations started at Tell Ahmar under the direction of G. Bunnens in 1989, the Hypogeum was excavated again during four campaigns in 1989, 1997, 1998 and 1999.<sup>4</sup> Since its first discovery, the Hypogeum had long been considered to be an impressive stone-chamber tomb, completely buried and isolated from other buildings. The Bunnens excavations yielded new information that enabled archaeologists not only to study the distinctive features of the chamber tomb, but also to recognise that it was the centre of an elaborate complex. With this more extensive knowledge of the tomb it became possible to formulate new hypotheses concerning its function and significance.

### The Hypogeum Complex

The Hypogeum complex was situated on the south-eastern slope of the acropolis, facing the Euphrates in a very visible position. The complex extended over an area of *ca.* 200 m<sup>2</sup> and consisted of three main parts built simultaneously in the Early Bronze Age IV: the Hypogeum, the North Room, and a staircase leading to the North-West Room (Fig. 2). The funerary complex remained in use for a long period of time. Two main phases have been identified; namely, Phase B (the earlier) and Phase A (the more recent). The analysis of these phases will be considered below.

The Hypogeum represented the central and most important part of the complex. It had a rectangular shape measuring 7.4 m from east to west and 6.5 m from north to south.<sup>5</sup> The chamber tomb was completely stone made and had remained undisturbed until its discovery.<sup>6</sup> The walls consisted of undressed limestone blocks set in fairly regular courses and they were roofed over with flat, large, limestone slabs. Two corbelled walls flanked the inner sides of the north and the south walls, within the chamber tomb. The roofing slabs were set directly on the corbelled walls. Rectangular slabs of soft, yellow limestone composed the floor of the chamber tomb. This limestone pavement was fairly well preserved in the eastern half of the tomb. The entrance of the tomb was situated on its western side and consisted of a doorway, 1 m wide and 1.6 m high, paved with a limestone threshold, which was set on a foundation of pebbles. The threshold stood 0.15 m above the floor of the chamber tomb. A limestone slab was used as the lintel of the doorway, but

<sup>2</sup> Thureau-Dangin and Dunand 1936.

<sup>3</sup> Thureau-Dangin and Dunand 1936, pp. 88, 96.

<sup>4</sup> For the preliminary reports see Bunnens 1998; 2001; 2002; Roobaert and Bunnens 1999.

<sup>5</sup> Bunnens 2002, p. 166.

<sup>6</sup> Thureau-Dangin and Dunand 1936, p. 96.

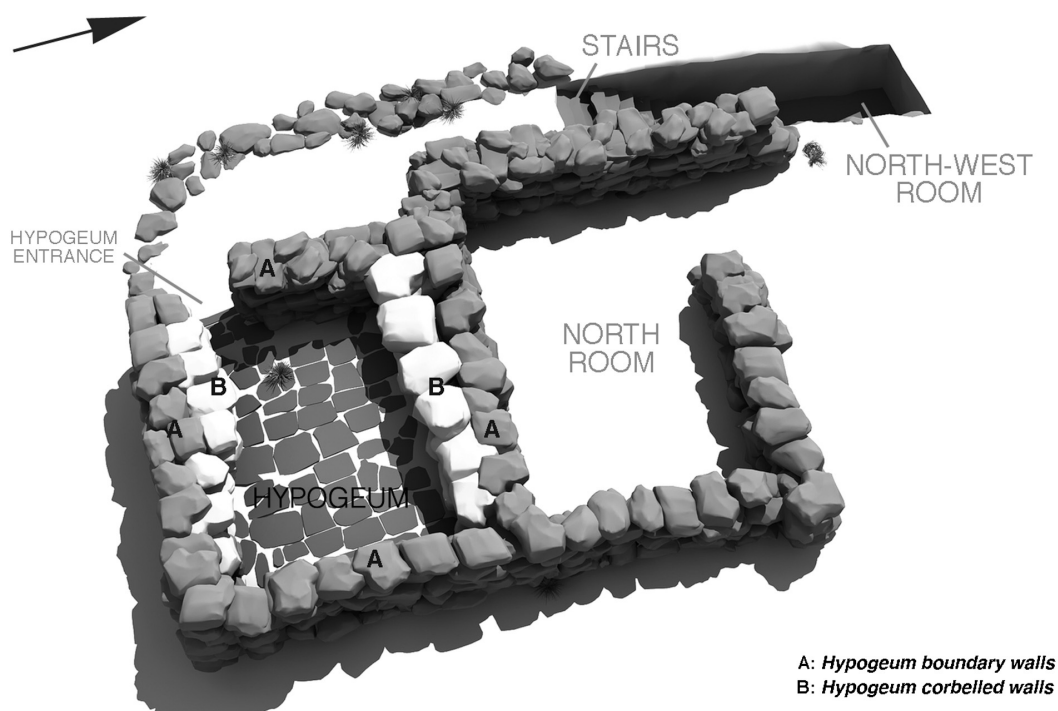


Fig. 2. 3-D reconstruction of the Hypogeum complex during the earlier Phase (Reconstructed by Arch. F. Renier with the author's suggestions).

was smaller than the roofing slabs and was situated at a lower elevation than those of the roof. The entrance became progressively narrower towards the top since the corbelled wall was used as the southern door jamb. The Hypogeum contained the skeletal remains of two individuals resting in the eastern part of the tomb. Unfortunately, the skeletons were badly damaged by the collapse of a roofing slab onto the two bodies, precluding the possibility of obtaining more information from the bones (for example, sex and age of the dead).<sup>7</sup> Moreover, inside the chamber tomb 1045 complete ceramic vessels, 33 bronze items, and a few ovine bones were deposited.

To the north of the Hypogeum there was a large room, identified as the North Room, which was closely related to the chamber tomb.<sup>8</sup> The North Room was erected with large irregularly shaped limestone blocks set on a thin layer of mud (Fig. 3). Only the lower courses and foundations of the North Room walls were made of stone, while the upper part of the walls were built of mud bricks, which were preserved only in the southern part of the east wall and in the central part of the west wall. Traces of a wooden beam, probably belonging to the roof, were excavated in the upper layers inside the room pertaining to Phase A (F 19.40). Under the floor belonging to Phase B, in the south-eastern part of the North Room, six child burials were discovered. These

<sup>7</sup> The only certain information concerned the bodies which belong to a couple of adults, see Thureau-Dangin and Dunand 1936, p. 97.

<sup>8</sup> Baccarin 2012.



Fig. 3. The North Room seen from the north-east corner during Phase B (Photo: Tell Ahmar Expedition).

burials were furnished for the most part with rich grave goods. The child burials included cooking pot inhumations, pit burials,<sup>9</sup> and cist graves.

To the west of the North Room there was a monumental staircase leading to another small room further north. The staircase and the North-West Room made up the third part of the Hypogeum complex. The staircase was delimited on the west side by a 1 m-thick stone wall while on the east it was laid alongside the west wall of the North Room (Fig. 4). The stairs were built in stone and between the top of the staircase and the bottom there was a difference in height of *ca.* 1.5 m.

The area of the mound around the staircase has been greatly disturbed by a modern pit and by a trench from the Thureau-Dangin excavations. In spite of this, a thin layer of plaster has been preserved on the surface of the stairs, starting from the second step. During Phase B, the North-West Room covered a small area extending 3.5 m from north to south and 3 m from east to west. The room was delimited on the north and the east sides by small stone walls. No walls have been excavated towards the west. The room was paved with large irregular slabs covered with a thick layer of white plaster. No archaeological finds have been discovered on the surface of the floor or within the North-West Room.

<sup>9</sup> Dugay 2005.



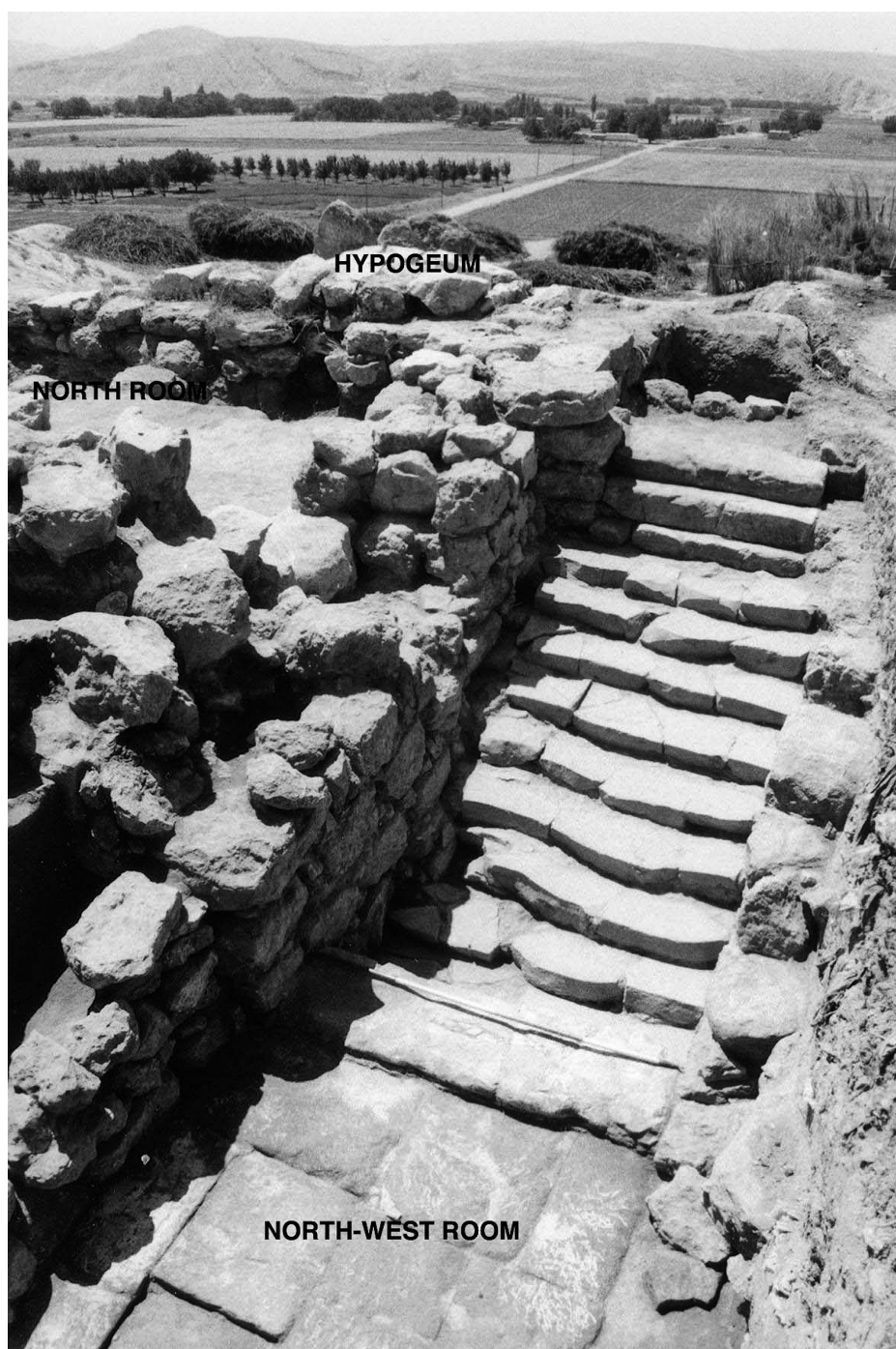


Fig. 4. The staircase and the North-West Room seen from the north-west corner during Phase B (Photo: Tell Ahmar Expedition).



In addition, outside the complex, a group of satellite burials located on the south and east side of the Hypogeum have been excavated. These are five cist graves with stone-lined walls, except for one (Tomb 3) which had walls constructed of mud bricks.<sup>10</sup> As the cist graves were completely buried and set at a higher position than the Hypogeum, they must have been placed there during the latest phase of the complex, when the Hypogeum was hidden underground for the most part, as we shall see below.

### Period of use of the Funerary Complex

During the period of use of the funerary complex, two main phases have been identified, numbered, from top to bottom, Phase A and Phase B. Both have been dated to the Early Bronze Age IV. During the earlier phase some changes affected the architectural structure of the North Room, justifying the subdivision of Phase B into two sub-phases; namely, B1 and B2. Sub-phase B2 is comprised of the whole complex's construction period as well as the initial period of use, while B1 is characterised by a partial reconstruction of the North Room, in the northern sector. The later phase has also been subdivided into two sub-phases: A1 and A2. The most impressive modifications pertained to A2, when a reorganisation of the North Room, along with modifications concerning the staircase and the North-West Room, took place. During Phase A2 the interior of the North Room was rearranged and a partition wall running north-south was built to divide the area into two small rooms (Fig. 5).<sup>11</sup> Moreover, three more steps were added at the top of the staircase and the North-West Room was repaved with limestone slabs covered with white plaster.

Phase A came to an end as the consequence of a massive fire which destroyed the North Room. After the destruction, the whole area was covered by one metre of destruction debris and the Hypogeum was entirely buried.

Unlike the other part of the complex, the chamber tomb did not undergo any changes during its period of use, maintaining its original shape and function. The only modification that affected the chamber tomb involved its external aspect. At the beginning of Phase B, when the funerary complex was erected, the chamber tomb was set above ground in a highly visible position. During the use of the complex, the ground level outside the chamber tomb was raised by more than one metre, so that at the very beginning of Phase A the walls of the chamber tomb were for the most part buried in the ground, while the walls of the North Room and the top of the staircase were raised.

In reference to this, the Hypogeum entrance shaft, described in the French publication, is said to have consisted of a rectangular mud-brick construction about 2.2 m long, 1.4 m wide and 2.5 m high.<sup>12</sup> According to Dunand's report, there was a difference in height of about 2.5 m between the Hypogeum threshold and the top of the shaft. Therefore, the mud-brick shaft would have reached the same height as the tomb roof. Considering that the Hypogeum was set above ground in a very visible position during Phase B, an entrance shaft was unnecessary at that stage. This hypothesis is confirmed by the fact that no evidence was found for the mud-brick shaft giving access to the chamber tomb when excavation of the Hypogeum resumed in 1989. The mud-brick construction,

<sup>10</sup> Thureau-Dangin and Dunand 1936, pp. 108–110.

<sup>11</sup> Baccarin 2012.

<sup>12</sup> Thureau-Dangin and Dunand 1936, p. 96.

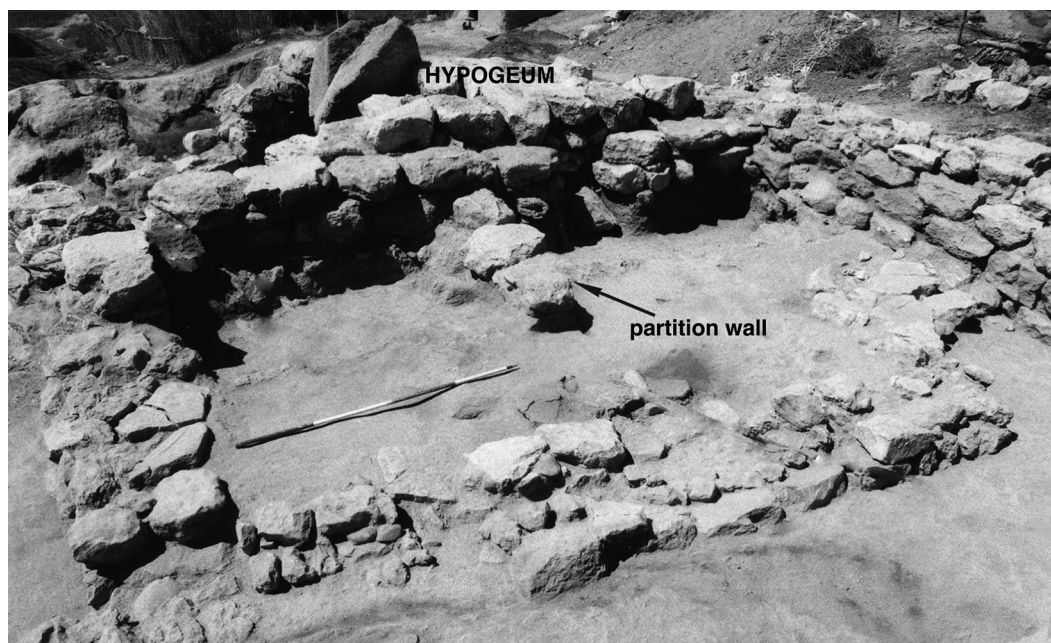


Fig. 5. The North Room divided into two small rooms by a partition wall during Phase A (Photo: Tell Ahmar Expedition).

identified as a shaft by Dunand, very probably belonged to another structure or had been added in a following phase when the Hypogeum was for the most part, or even entirely, hidden underground. Taking into consideration that the funerary complex remained in use for a long period and that the chamber tomb was not reused for subsequent inhumations, it seems useless to have built an access shaft to the tomb in the final stage of utilisation of the complex. Therefore it seems highly plausible that the mud-brick shaft pertained to another structure. Moreover, the Hypogeum was closely connected to the staircase situated further north, as is shown by a plaster floor (F 20.46) visible in the corner between the Hypogeum and the western wall of the North Room. This plaster floor was cut towards the west and the south by the French excavations, but it is highly plausible that the floor continued towards the west, connecting the Hypogeum with the staircase. The existence of the shaft would have hindered passage between the two.

### Origins, Characteristics and Area of Distribution of the Monumental Early Bronze Age Chamber Tombs

The origin of the chamber tomb is still unknown. Recently a possible association with the cist grave has been suggested on the basis of the similar building technique, the possibility of the tomb holding several depositions, and the quantity of funerary goods.<sup>13</sup> Cist graves were common

<sup>13</sup> Yilmaz 2006, p. 72.

in the Euphrates Valley mainly during the third millennium BC, representing one of the most frequent burial types.<sup>14</sup> They consisted of a square or rectangular pit with stone or mud-brick walls, containing one or more individuals generally accompanied by an abundance of grave goods. This type of burial most likely originated in the fourth-millennium Kura-Araxes culture in the Transcaucasian region and it was introduced into Eastern Anatolia as that culture expanded, starting from the end of the fourth millennium.<sup>15</sup> Later on, this type of burial was introduced in the Euphrates Valley through the agency of the Upper Euphrates communities.<sup>16</sup> Chamber tombs seem to be a successor of the cist tombs, but several differences existed between the two. Not only were chamber tombs more monumental than cist graves, but they were built in stone and their funerary goods were richer. In particular, the major difference between the two burial types concerned the position of the tomb. Cist graves were entirely underground whilst chamber tombs could be partially or completely above ground. Moreover, chamber tombs usually occupied a prominent position.

Chamber tombs were not built to a standard shape and some modifications were made to the basic structure, such as the plan and layout of the tomb. In some cases more attention to detail can be noted in the stonework. But there are some general features that enable us to ascribe them to this type of burial: an elaborate structure, monumental scale, the stonework itself and the presence of valuable grave goods. This category of burials is widespread in both the Syrian and Anatolian Euphrates Valley, where chamber tombs have been excavated in different sites. In the Turkish sector of the valley, chamber tombs have been excavated at Gre Virike, Hayaz Höyük and Lidar Höyük,<sup>17</sup> while in the Syrian Euphrates they have been reported at Jerablus Tahtani, Tell Hadidi and Tawi.<sup>18</sup> Some of these monumental tombs will be better examined below for their strong analogies with the Hypogeum complex.

The chamber tomb is not specific to the Euphrates Valley and some examples have been attested beyond the region. At Umm el-Marra, in the Jabbul plain, an elite mortuary complex that included ten tombs associated with installations and structures was located on the acropolis.<sup>19</sup> The tombs had stone walls with a mud-brick superstructure and differing dimensions. A stone-built chamber tomb, bearing strong analogies to the Hypogeum, was found at Tell Qaramel in the Aleppo region.<sup>20</sup> The walls of this chamber tomb (Tomb 1) were constructed with undressed limestone blocks, which presented evidence of corbelling and were roofed over with flat limestone slabs. The spread of this type of burial beyond the region of the Euphrates Valley opens up the question of the area of distribution of the Early Bronze Age monumental chamber tombs. No clear boundaries can be delineated for the chamber tombs' spatial distribution but a concentration of this type of burial in the Euphrates Valley, probably associated with the local culture, has to be registered.

<sup>14</sup> Cooper 2006, pp. 209–212.

<sup>15</sup> See Palumbi 2006.

<sup>16</sup> Palumbi 2006, p. 160.

<sup>17</sup> Ökse 2005, 2007 (Gre Virike); Roodenberg 1979 (Hayaz Höyük); Hauptmann 1982 (Lidar Höyük).

<sup>18</sup> Peltenburg et al. 1995 (Jerablus Tahtani); Dornemann 1980 (Tell Hadidi); Kampschulte and Orthmann 1984 (Tawi).

<sup>19</sup> Schwartz 2013, pp. 498–505; Schwartz *et al.* 2006.

<sup>20</sup> Mazurowski 1999, pp. 293–296, figs 7–8.

## Parallels

The Hypogeum complex at Tell Ahmar finds parallels in three other funerary complexes and chamber tombs discovered in the Euphrates River Valley.

Several analogies correlate the Hypogeum with the chamber tombs unearthed on the high terrace at Gre Virike, in southern Turkey.<sup>21</sup> Tombs K9 and L8 at Gre Virike were erected with the same building technique as the Hypogeum. Also, the chamber tombs were associated with cultic installations, structures identified as kitchens, and facilities for funerary rituals. Lastly, satellite burials were found associated with the tombs.

The building technique, the grave goods, and the presence of satellite burials surrounding the monumental tombs represent the points of comparison between the Hypogeum at Tell Ahmar and Tomb T. 302 at Jerablus Tahtani.<sup>22</sup> T. 302 is composed of two corbel-vaulted chambers, constructed with undressed limestone blocks. Furthermore, the tomb was built above ground in a very visible position facing the Euphrates.

The last relevant parallels in the Euphrates region come from Tell Hadidi, where several chamber tombs were found in Area L and Area D.<sup>23</sup> However, because the monumental tombs at Tell Hadidi were greatly disturbed by robber incursions in antiquity and in modern times, the only surviving analogy to the Hypogeum is the building technique. The chambers are corbel-walled rooms built with undressed blocks and covered with flat slabs, although these monumental burials were underground structures.

## Interpretation of the Funerary Complex

The identification of the Hypogeum, the North Room, the staircase, and the North-West Room as an integrated complex is based on two fundamental facts: the simultaneous construction of all the components to form a single building and the contemporaneous use of the components during the entire lifespan of the complex.

The function of the complex is connected with the funerary sphere for several reasons. The most obvious is the presence of the Hypogeum, a monumental tomb with the bodies of two adults and a large quantity of grave goods, which represents the central part of the complex. In addition, the presence of associated graves emphasises the significance of the Hypogeum complex as a funerary monument. The satellite burials located outside the complex and the six child burials, excavated in the south-eastern part of the North Room, underline the funerary value of the area and of the Hypogeum complex. There is some sort of hierarchy evident in the various inhumations, in which the Hypogeum comes first followed by the child burials and lastly by the satellite burials. The deposition of the cist graves during the final phase of the complex is an indication that the memory of the deceased remained alive within the community. Moreover, the choice of being buried in the proximity of the monumental tomb — probably belonging to the chief of the community — resulted from the desire to be placed as close as possible to

<sup>21</sup> Ökse 2005, pp. 23–40, figs 4, 18, 20; 2007, pp. 95–96, fig. 6.4.

<sup>22</sup> Peltenburg 1999, pp. 428–433, fig. 1; Peltenburg *et al.* 1995, pp. 7–15, figs 7–8.

<sup>23</sup> Dornemann 1979, pp. 117–118, figs 9–10; 1980, pp. 226–227, figs 15–17.

the funerary complex. Finally, a few considerations can be made concerning the function of the monument's other components. The large quantity of animal bones, pottery, and flint artefacts, together with the presence of an oven, a hearth and other facilities, suggest that the North Room was used as a kitchen, involved in some sort of consumption ritual, such as preparing the banquet in honour of the deceased. In contrast to this, as no material was found in the North-West Room, its function remains unclear; however, the thick layer of white plaster covering the floor and steps during Phases A and B could emphasise the importance and sacred value of the staircase as well as of the North-West Room.

## Conclusion

Funerary tradition in the Euphrates River Valley developed during the Early Bronze Age in terms of both the complexity of burial and the performance of funerary rituals in honour and memory of the deceased. This evolution is well represented by the chamber tomb, which combined articulate structures and celebrations for the dead. The Hypogeum complex at Tell Ahmar represents an important example of this new type of monumental grave. Architectural and functional analyses of the monumental tomb are essential in order to gain better knowledge and understanding of funerary tradition during the Early Bronze Age. The funerary complex at Tell Ahmar remained in use for a long period of time, during which its structure underwent partial reconstruction and modification. The chamber tomb was never reused for subsequent inhumations but several graves were located inside the complex (in the North Room) and in the surrounding area, emphasising the significance of the complex as a funerary monument. Considering its elaborate and monumental construction, as well as its prolonged use, the Hypogeum complex must have played a fundamental role in the funerary traditions of the nearby communities.

## Bibliography

Baccarin, C.

- 2012 "Burial practices in the Middle Euphrates area during the Early Bronze Age: The contribution of the Hypogeum of Tell Ahmar," in *Broadening Horizons 3: Conference of Young Researchers Working in the Ancient Near East*, edited by F. Borrel, M. Bouso, A. Gomez, C. Tornero and O. Vicente, pp. 137–149. Bellaterra: Univeritat Autònoma de Barcelona.

Bunnens, G.

- 1998 "Tell Ahmar/Til Barsib, the ninth and tenth seasons (1996/1997)," *Orient Express* 2: 27–30.  
 2001 "Tell Ahmar/Til Barsib, the eleventh, twelfth, and thirteenth seasons (1998/2000)," *Orient Express* 3: 65–68.  
 2002 "Til Barsib before the Assyrians," *Les Annales Archéologiques Arabes Syriennes* 45–46: 163–172.

Cooper, L.

- 2006 *Early Urbanism in the Syrian Euphrates*. New York: Routledge.

Dornemann, R.

- 1979 "Tell Hadidi: A millennium of Bronze Age city occupation," in *Archaeological Reports from the Tabqa Dam Project, Euphrates Valley, Syria*, edited by D. N. Freedman, pp. 113–151. Cambridge, MA: American Schools of Oriental Research.



- 1980 "Tell Hadidi: An important center of the Mitanni period and earlier," in *Le Moyen Euphrate*, edited by J.-C. Margueron, pp. 218–234. Leiden: E. J. Brill.
- Dugay, L.  
2005 "Early Bronze Age Burials from Tell Ahmar," *Subartu* 16: 37–49.
- Hauptmann, H.  
1982 "Lidar Höyük 1981," *Türk Arkeoloji Dergisi* 26, no. 1: 93–110.
- Kampschulte, I. and Orthmann, W.  
1984 *Gräber des 3. Jahrtausends im syrischen Euphrattal*. Vol. 1. *Ausgrabungen bei Tawi 1975 und 1978*. Bonn: Habelt.
- Mazurowski, R. F.  
1999 "Tell Qaramel: Preliminary report on the first season," *Polish Archaeology in the Mediterranean* 11: 285–296.
- Ökse, A. T.  
2005 "Early Bronze Age chamber tomb complexes at Gre Virike (Period II A) on the Middle Euphrates," *Bulletin of the American Schools of Oriental Research* 339: 21–46.  
2007 "A 'high' terrace at Gre Virike to the north of Carchemish: Power of local rulers as founders?," in *The Carchemish Region in Early Bronze Age: Investigating the Archaeology of Boundaries*, edited by E. Peltenburg, pp. 94–104. Oxford: Oxbow Books.
- Palumbi, G.  
2006 "From collective burials to symbols of power: The translation of role and meanings of the stone-lined cist burial tradition from Southern Caucasus to the Euphrates Valley," in *Sepolti tra i vivi — Buried Among the Living: Evidenza ed interpretazione di contesti funerari in abitato, Atti del convegno internazionale, Roma, 26–29 Aprile 2006* (Scienze dell'Antichità: storia archeologia antropologia, 14), edited by G. Bartolini and G. Benedettin, pp. 140–167. Rome: Ed. Quasar.
- Peltenburg, E.  
1999 "The Living and the ancestors: Early Bronze Age mortuary practices at Jerablus Tahtani," *Archaeology of the Upper Syrian Euphrates, The Tishrin Dam Area: Proceedings of the International Symposium Held at Barcelona, January 28th–30th, 1998*, edited by G. del Olmo Lete and J. Montero Fenollós, pp. 427–442. Barcelona: AUSA.  
2009 "Enclosing the Ancestors and the Growth of Socio-Political Complexity in Early Bronze Age Syria," in *Sepolti tra i vivi — Buried Among the Living: Evidenza ed interpretazione di contesti funerari in abitato, Atti del convegno internazionale, Roma, 26–29 Aprile 2006* (Scienze dell'Antichità: storia archeologia antropologia, 14), edited by G. Bartolini and G. Benedettini, pp. 216–247. Rome: Ed. Quasar.
- Peltenburg, E., Campbell, S., Croft, P., Lunt, D., Murray, M. A. and Watt, M. E.  
1995 "Jerablus-Tahtani, Syria 1992–1994: Preliminary Report," *Levant* 27: 1–28.
- Porter, A.  
2002a "Communities in conflict: Death and the contest for social order in the Euphrates River Valley," *Near Eastern Archaeology* 65, no. 3: 156–173.  
2002b "The dynamics of death: Ancestor, pastoralism, and the origin of a third-millennium city in Syria," *Bulletin of the American Schools of Oriental Research* 325: 1–36.
- Roodenberg, J. J.  
1979 "Premiers resultats des recherches archéologiques à Hayaz Höyük," *Anatolica* 7: 21–35.

Roobaert, A. and Bunnens, G.

- 1999 "Excavations at Tell Ahmar-Til Barsib," in *Archaeology of the Upper Syrian Euphrates, The Tishrin Dam Area: Proceedings of the International Symposium Held at Barcelona, January 28<sup>th</sup>–30<sup>th</sup>, 1998*, edited by G. del Olmo Lete and J. Montero Fenollós, pp. 163–178. Barcelona: AUSA.

Schwartz, G.

- 2013 "Memory and its demolition: Ancestors, animals and sacrifice at Umm el-Marra, Syria," *Cambridge Archaeological Journal* 23, no. 3: 495–522.

Schwartz, G., Curvers, H., Dunham, S., Stuart, B. and Weber, J.

- 2006 "A third-millennium BC elite mortuary complex at Umm el-Marra, Syria: 2002 and 2004 excavations," *American Journal of Archaeology* 110: 603–641.

Thureau-Dangin, F. and Dunand, M.

- 1936 *Til Barsib*. Paris: P. Geuthner.

Yilmaz, D.

- 2006 "Burial customs of the chamber tombs in Southeast Anatolia during the Early Bronze Age," *Anatolia* 31: 71–90.

Cristina BACCARIN

E-mail: cristinabaccarin@hotmail.com

# Double-spiral-headed Pins from Georgia

Jean-Louis HUOT

## Abstract

*Double-spiral-headed pins are one of the most distinctive objects of the Early Trans-Caucasian (Kura-Araxes) culture. This paper updates the nuanced typology of these objects by assembling new examples from Anatolia and Georgia, the southern Caucasus.*

Recent publications have attracted my attention to double-spiral-headed pins from Georgia. These publications are additions to an already venerable body of research, begun before the Second World War, resumed afterward and continued two decades later.<sup>1</sup> I recently proposed an assessment of this research,<sup>2</sup> unfortunately without the knowledge of important work concerning the discoveries at Arslantepe.<sup>3</sup> The publication of the tombs at Natsargora and other cemeteries in the region of Shida Kartli has added still more to this body of research.<sup>4</sup>

In 1969, I first wrote about the abundance of double-spiral-headed pins from the Caucasus. I divided these pins of various forms into several groups: my sub-type A1 (no. 13, Kabardino), my sub-types B2 (no. 49, Kortsia), C3a (no. 58, Gaten Kale), C3b (no. 62, Rachta Galiath) and C3c (no. 69, Kumbulte), and my sub-type X2 (no. 73, Kabardino). The Caucasus region seemed to me to be abundantly represented.

Approaching this subject with a focus on new publications, A. Sagona brought attention in a more detailed way to this region.<sup>5</sup> He emphasised that the earliest double-spiral-headed pins come from “Early Transcaucasian” sites in Georgia (Samshvilde and several sites in Kvemo Kartli). In the southern Caucasus, the “Early Transcaucasian Culture” (ETC), or Kura-Araxes culture, is considered to be a period of the early Bronze Age, situated generally between 3500 and 2200 cal. BC. In this context, Sagona rightly compared the example from Samshvilde to others from Kvatskhelebi and Urbnisi. He also referred to two examples, from Ghait Mazi and Dzagina, of clearly different form, as well as a more ordinary pin from Beshtasheni.

I took up this question,<sup>6</sup> believing it judicious to distinguish, in the context of a general typological classification, between two different Georgian types: Type 2, with a triangular enlargement that is pronounced or indented (no. 29, Samshvilde; that is, Sagona 1981, fig. 1.1, to which

<sup>1</sup> Childe 1936; Piggott 1948; Huot 1969. The latter article, to my knowledge, has had no successor except one: Sagona 1981.

<sup>2</sup> Huot 2009.

<sup>3</sup> Palumbi 2008.

<sup>4</sup> Puturidze and Rova 2012a; 2012b. My thanks to C. Chataigner for calling my attention to these publications, and for guiding me in a field that is very familiar to her.

<sup>5</sup> Sagona 1981.

<sup>6</sup> Huot 2009.

I compare various pins from Anatolia, my nos. 30 to 32, and 51) and Type 6, with a triangular plane and rounded top, quite close to Type 2, but belonging to Georgia. In fact, to my no. 73 (Huot 1969), from Kabardino, I add, following Sagona, an example from Ghait Mazi<sup>7</sup> (Sagona's fig. 1.3) and especially no. 57 from Kvatskhelebi tomb 8 (Sagona's fig. 1.2). I add no. 58 from Urnisi tomb 44 and no. 59 from Bazum, recently published. The latter type seems to me "characteristic of the early Bronze or ETC" of Georgia and Armenia. I estimated that "the only difference is that the examples of the ETC group (my Type 6) are rounded at the top, whereas the Anatolian-Caucasian variant (my Type 2) has a top where the start of the two spirals is clearly marked by an indentation in a widely open V shape."<sup>8</sup>

A recently published pin from Tomb 375 at Natsargora<sup>9</sup> renders useless this clear-cut distinction. This beautiful pin, classified by M. Tonussi as "one of the most typical productions of the Transcaucasian area in the late 4th and of the 3rd millennia"<sup>10</sup> appears to me to be intermediate between my Type 2 and my Type 6.<sup>11</sup> The top is very slightly concave and not convex, but it is not clearly "indented". The three variants (indented, convex or slightly concave) are attested for the identical period (ETC) in central Georgia, in the middle Kura valley. These three Georgian variants appear to be simply the products of different workshops that were near to each other. It is probably necessary, on the other hand, to clearly distinguish a sub-type with a wide and highly rounded head, attested at Ghait Mazi (Huot 2009 no. 56 = Sagona 1981 fig. 1: 3).<sup>12</sup>

In the interesting work of G. Palumbi mentioned above, one plate is worthy of comment.<sup>13</sup> It groups together pins from Georgia and Anatolia. Palumbi's no. 6 is too incomplete to be classified and his no. 10 is a pendant, and so these must be discounted. For the remaining objects, the pins with wide, highly rounded heads should be considered together and could be called the Ghait Mazi group (his no. 9), usefully comparable to the Anatolian examples (his nos. 2 and 5, from Norsuntepe). As for the other Georgian pins (Palumbi's nos. 7, 8 and 13), it should be pointed out that the drawing of no. 13 (from Sagli I) is probably erroneous (why make round a slightly concave top?) and that on this plate two variants are placed side by side, one with a concave, almost indented top, his no. 7 (from Samshvilde) and his no. 8 (from Kvatskhelebi). I also consider the Georgian variants (indented, convex or slightly concave) to be from workshops that are all Georgian. And descendants for these variants can be proposed thanks to an Anatolian example from Kalecik,<sup>14</sup> northwest of Tilkitepe on the east bank of Lake Van. This very interesting pin was the first mentioned for my Type 2,<sup>15</sup> of which I reported that in my opinion "we have here a clear but rare link between the shores of the Mediterranean and Transcaucasia. The earliest example would have come from the Kura-Araxes culture (ETC culture) of Transcaucasia and the latest from Poliochni II."<sup>15</sup>

<sup>7</sup> Huot 2009, no. 56.

<sup>8</sup> Huot 2009, p. 198.

<sup>9</sup> Puturidze and Rova 2012b, p. 11; Tonussi 2012, pp. 49–50 and p. 145 fig. 7 no. 3.

<sup>10</sup> Tonussi 2012, p. 49.

<sup>11</sup> In Huot 2009.

<sup>12</sup> Palumbi 2008, p. 131 fig. 4:19.

<sup>13</sup> Palumbi 2008, no. 4.

<sup>14</sup> Huot 2009, no. 30.

<sup>15</sup> Huot 2009, p. 190 and pl. 6 Type 2.

To sum up, the middle valley of the Kura in Georgia has produced a beautiful series of pins, all of which come from tombs of the ETC culture. Most of these have a head that is convex in profile (Fig. 1: 1–4). An example from Samshvilde (Fig. 1: 5) has a head with indented profile. Whether the example from Sagli 1 is considered to have a head with a convex or a concave profile (Fig. 1: 6), this beautiful pin belongs to the same group. It comes from a cemetery in North Ossetia. For this Georgian series, the comments of Palumbi are most useful. He considers the pins to be “a characteristic element of the Kura-Araxes culture in the fourth and third millennia.”<sup>16</sup> The example from Kalecik (Fig. 1: 7) is an important link with the Anatolian pins. The latter have a head with indented profile (Fig. 2: 1–3) like those of Kalecik and Samshvilde. Whether they have a convex or concave top, or even a widening with rounded top (variant of Ghait Mazi, Fig. 2: 4–5), these Georgian pins are the prototypes for a series of Anatolian pins, from Arslantepe (Fig. 3: 1–3) and Tarsus (Fig. 3: 4–6), which are my sub-types 1.1 and 1.2.<sup>17</sup> These double-spiral-headed pins were to have a good future, as much to the west in the Anatolian domain as to the east of the Caucasus, towards northern Iran, central Asia (at Gonur: Fig. 3: 7), the Helmand valley (at Said Qala, south of Mundigak, Fig. 3: 8) and as far as Manda at the India-Pakistan frontier (Fig. 3: 9). Very similar pins appear regularly on the antiquities market (Fig. 3: 10, 11).

In Georgia itself, the variants do not appear to be important, and the existence of workshops belonging to this region can be recognised, as I proposed in 2009. Their products are found in tombs that definitely belong to the ETC culture of Transcaucasia. The period of production remains hazy, however — from the end of the fourth millennium to the first half of the third. But the precise chronology of the ETC culture remains a subject of discussion for specialists, and consensus has not yet been reached.

## Bibliography

Childe, V. G.

1936 “The axes from Maikop and Caucasian metallurgy,” *Annals of Archaeology and Anthropology* 23: 113–119.

Huot, J.-L.

1969 “La diffusion des épingles à tête à double enroulement,” *Syria* 46: 57–93.

2009 “Quelques réflexions sur les épingles à double spirale,” *Syria* 86: 181–202.

Palumbi, G.

2008 *The Red and Black: Social and Cultural Interaction between the Upper Euphrates and Southern Caucasus Communities in the Fourth and Third Millennium BC* (Studi di Preistoria Orientale, 2). Rome: Sapienza Università di Roma.

Piggott, S.

1948 “Notes on certain metal pins and a mace-head in the Harappan culture,” *Ancient India* 4: 26–40.

<sup>16</sup> Palumbi 2008, pp. 128–129 and p. 131 fig. 4:19.

<sup>17</sup> Huot 2009.



Puturidze, M. and Rova, E.

2012a "The Joint Shida Kartli Archaeological Project: Aims and Results of the First Field Season (Autumn 2009)," in *Proceedings of the 7<sup>th</sup> International Congress on the Archaeology of the Ancient Near East: 12 April-16 April 2010*. Vol. 3 *Fieldwork & Recent Research, Posters*, edited by R. Matthews and J. Curtis, pp. 51–70. Wiesbaden: Harrassowitz Verlag.

2012b *Khashuri Natsargora: The Early Bronze Age Graves* (Publications of the Georgian-Italian Shida Kartli Archaeological Project, 1; Subartu 30). Turnhout: Brepols.

Sagona, A.

1981 "Spiral-headed pins: A further note," *Tel-Aviv*, 8, no. 2: 152–159.

Tonussi, M

2012 "Metal objects", in *Khashuri Natsargora: The Early Bronze Age Graves* (Publications of the Georgian-Italian Shida Kartli Archaeological Project, 1; Subartu 30), edited by M. Puturidze and E. Rova, pp. 49–52. Turnhout: Brepols.

Jean-Louis HUOT

Université de Paris I-Panthéon-Sorbonne

E-mail: jean-louis.huot2@wanadoo.fr

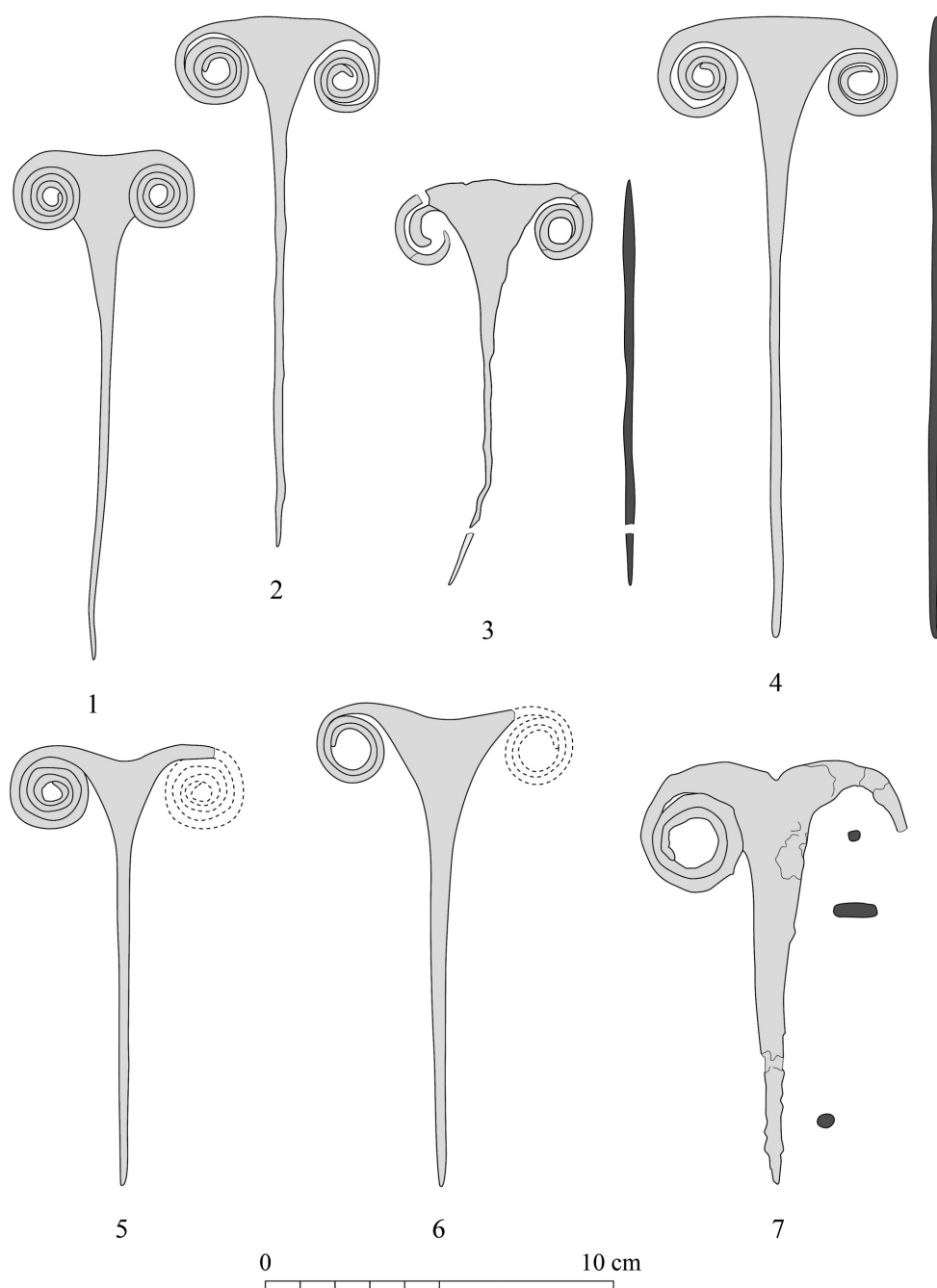


Fig. 1. ETC Pins.

N° 1-4: Convexe Profile: 1 Natsargora, Burial 375, after Puturidze and Rova 2012b, fig. 7 n° 3; 2 Kvatskhelebi, Burial 8, after Huot 2009, n° 57 = Sagona 1981, n° 2; 3 Kvatskhelebi, Burial 5, after Puturidze and Rova 2012b, fig. 13c, n° 3; 4 Urbnissi, Burial 44, n° 5, after Puturidze and Rova 2012b, fig. 27, 5.

N° 5-7: Indented Profile: 5 Samshvilde, after Palumbi 2008, fig. 4.19 n° 7; 6 Sagli 1, after Palumbi 2008, fig. 4.19 n° 13; 7 Kalecik, after Palumbi 2008, fig. 4.19 n° 4.

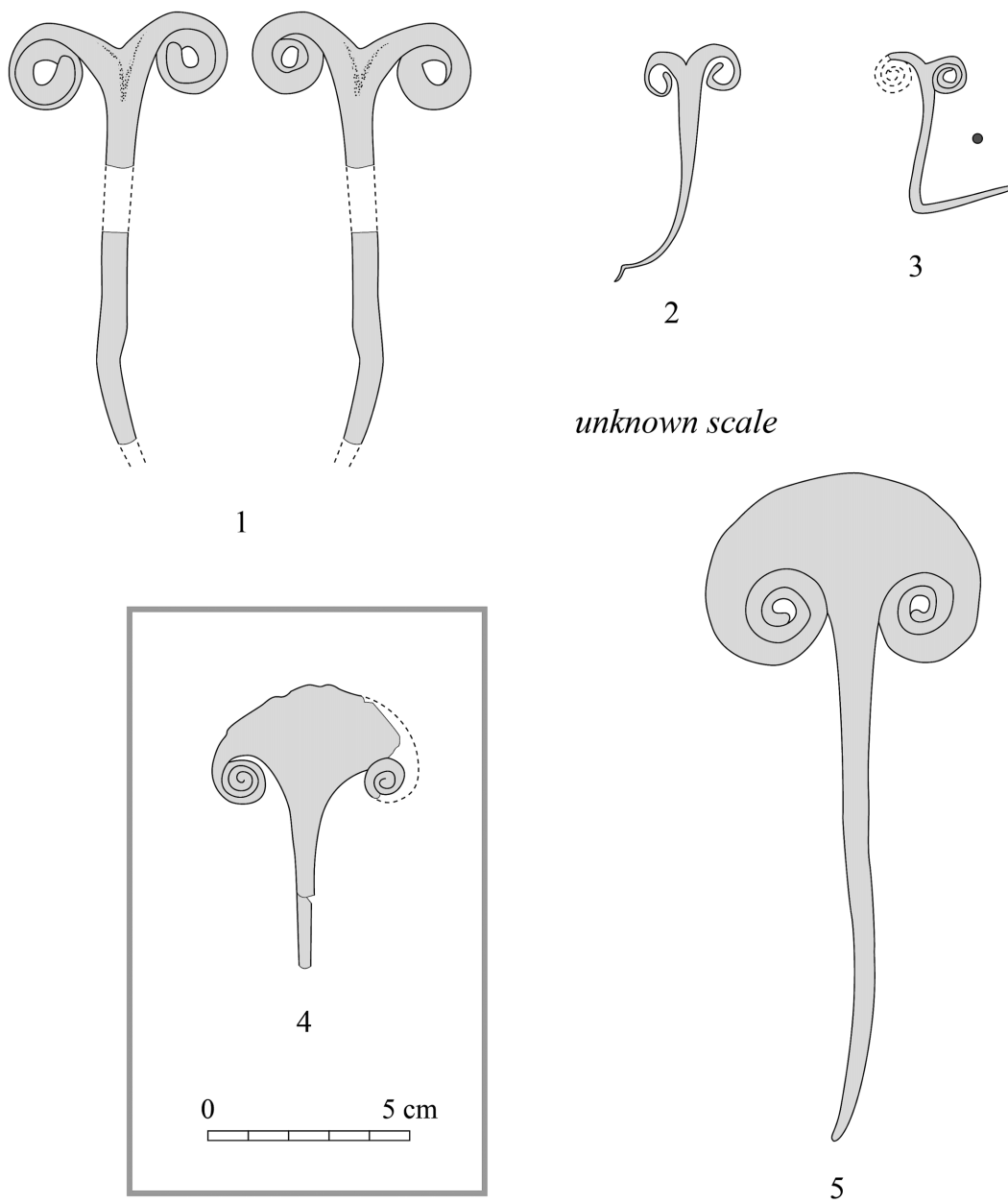


Fig. 2. Anatolian Pins: 1 Poliochni II, after Huot 2009, n° 31; 2 Alaca III 5-8, after Huot 1969, n° 51; 3 Çayırıyolu, after Huot 2009, n° 32.  
Ghait Mazi variant: 4 Dzaghina, Burial 1, after Puturidze and Rova 2012b, fig. 44a n° 3; Ghait Mazi, after Huot 2009, n° 56.

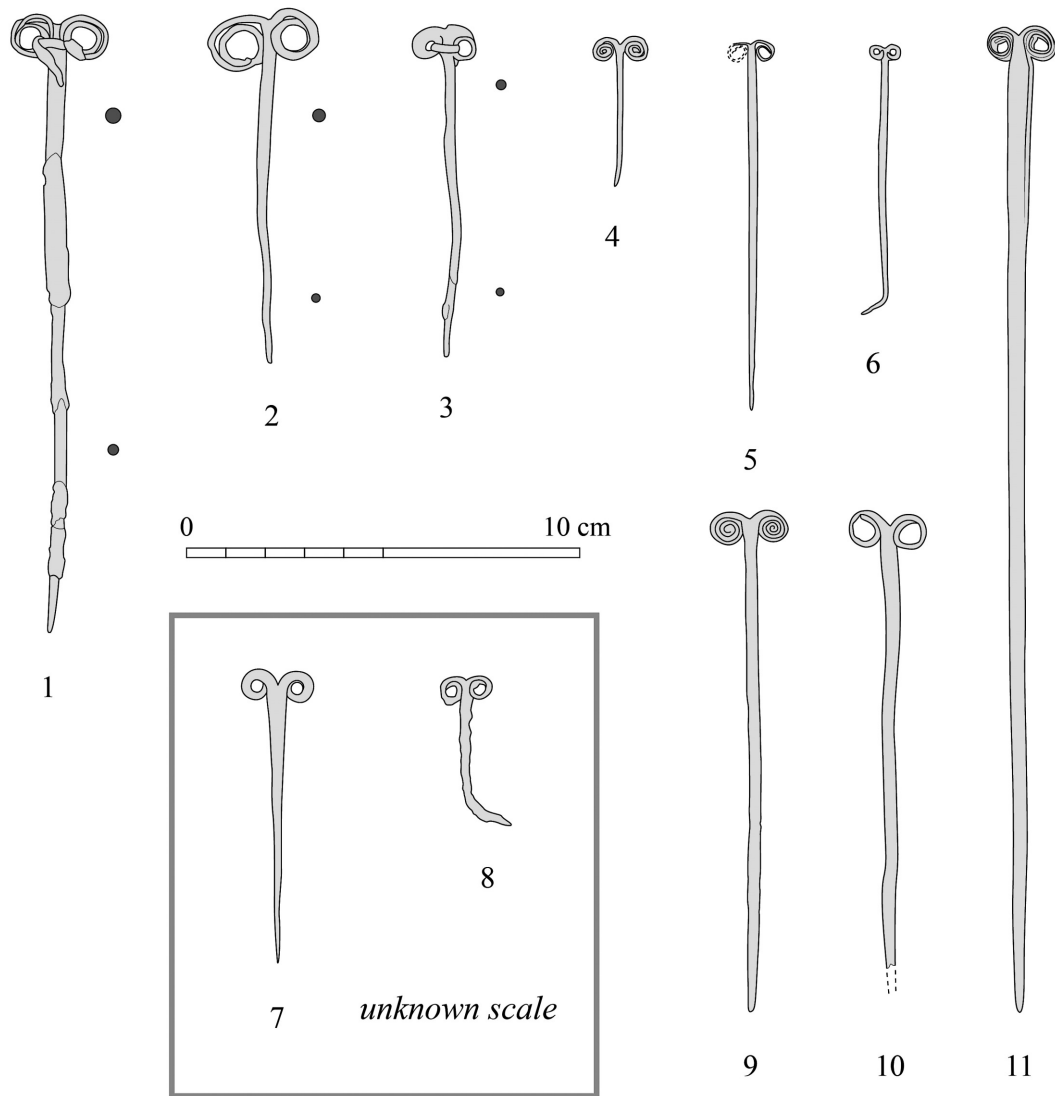


Fig. 3. Anatolian Pins: 1 Arslantepe VI B, after Huot 2009, n° 1; 2 Arslantepe VI B, after Huot 2009, n° 3; 3 Arslantepe VI B, after Huot 2009, n° 2; 4 Tarsus Middle Bronze, after Huot 2009, n° 5; 5 Tarsus Middle Bronze, after Huot 2009, n° 6; 6 Tarsus Middle Bronze, after Huot 2009, n° 7. Central Asia Pins: 7 Gonur, after Huot 2009, n° 9; 8 Said Qala, after Huot 2009, n° 8; 9 Manda, after Huot 2009, n° 12. Unknown Provenance (Central Asia?): 10 Paris, Private collection, after Huot 2009, n° 10; 11 Paris, Private collection, after Huot 2009, n° 11.

# Women and Their Status in Urartu: A Critical Review

Rafet ÇAVUŞOĞLU, Kenan IŞIK and Bilcan GÖKCE

## Abstract

*The deficiency of Urartian written sources on social issues has made Urartian women more mysterious. However, the mystery of women's lives in Urartu, a powerful kingdom in the Ancient Near East, can to some degree be solved using the limited data available. In both Urartian and Assyrian written documents, we see data related to women forced to migrate by Urartian kings, and to captive Urartian women in Assyria and their fates. In Urartian written sources, some interesting data are found, such as the names of two Urartian women (queens), the story of a woman taken from one man and given to another as wife, and details of the abduction of a girl. Additionally, written sources, archaeological remains and depictions in art provide information about the positions of Urartian women in social and religious life, together with their professions, clothes and burial types. It can be seen that there were some differences between noble and non-elite women. It can also be understood that women had certain functions within Urartian religion, working life and marriages.\**

## Introduction

The increase in recent years in the number of studies mentioning women in Urartu is worth attention. In the first of these studies, published by Grekyan in 2008, the author examines dynastic marriages between Urartu and other contemporary kingdoms.<sup>1</sup> Grekyan proposes, based on Neo-Assyrian written data, that Sardur III (643–? BCE), one of the last kings of Urartu, was the son-in-law of Assurbanipal (668–627 BCE), one of the last kings of Neo-Assyria. Konyar also mentions Urartian women in an article based on written sources and representations in art.<sup>2</sup> In particular, he assesses female figures in terms of iconography. He concludes that women took no part in Urartian public life. The women described were goddesses or patricians. In her 2012 article, Çevik attempts to determine the status of women in Urartian society in the light of written sources and depictions in art.<sup>3</sup> She argues that female figures were goddesses or queens. He proposes that bronze statuettes of women were goddesses but that it is uncertain whether female figures depicted as sitting on thrones represented goddesses or queens or not. As a result of her study, Çevik concludes that the representation of women in Urartian public life was insignificant.

\* The authors deeply thank Professor Paul Zimansky for suggesting many improvements to this paper.

<sup>1</sup> Grekyan 2008.

<sup>2</sup> Konyar 2011.

<sup>3</sup> Çevik 2012.



In all the articles, certain subjects related to women were emphasised. The common deficiency in the studies can be said to be that philological discussions on Urartian women, written texts, material culture (jewellery, clothing, et cetera) and anthropological (burial) remains uncovered in excavations were not fully taken into account. Additionally, little data was incorporated about the contributions of women to production in Urartian society, the branches of professions in which women were found, and other subjects related to social life.

In this study, an attempt is made to collect and re-evaluate all available material culture, texts and artistic depictions related to Urartian women. Our study is significant in terms of determining the status of women — who we believe had an important role in the Urartian state — in the palace and in wider society, women's contributions to production in socio-economic life, their garments and accessories, their burial types, and the differences in status between women.

### Terms Defining Women in Urartian Written Sources

Military campaigns, reconstruction activities and religious issues usually constitute the subjects of Urartian inscriptions. In the texts, male-themed issues are expressed in male-dominated language.<sup>4</sup> Hence, except for a few tablets about social and political issues, there is little information about women on the stone inscriptions which constitute an important part of the Urartian written sources. The only known references are to women taken as booty in military campaigns.

Different expressions can be seen defining women in these inscriptions. The sumerogram of MUNUS in Mesopotamian cuneiform literature was used with the meaning of “woman”. Additionally, MUNUS is a determinative, showing that names of people, animals and professions are feminine.<sup>5</sup> The logogram of MUNUS (𐎶𐎵) was used to define both “woman” and female names in the Urartian written sources.<sup>6</sup> There are some inscriptions on which MUNUS was used alone, with the meaning of “woman”.<sup>7</sup> Besides this, we also encounter some words in the Urartian language in which MUNUS is used as a determinative. These words are úedia and lutú. These words appear especially in Urartian battle booty lists and lists of mass population transfers. Considering these words, the word úedia in inscription firstly seen as <sup>LÚ</sup>úedia. The word <sup>LÚ</sup>úedia is originally seen on common inscriptions of King Išpuini and his son Minua (820–810 BCE).<sup>8</sup> Salvini has translated the word “úedia” appearing with the sumerogram LÚ as “donna in other words as “woman”;<sup>9</sup> however, it has also been suggested that the

<sup>4</sup> The subject of most Urartian inscriptions constitutes offerings to male gods — who are the symbol of power — and most particularly the god of war Haldi, as well as activities carried out by men (king-his army) such as battle, looting, reconstruction activities and sporting (power) shows. Generally the terms which the Urartian king uses to describe himself, such as “defeating”, “subjugating”, “making somebody grovel”, “shooting arrows a great distance” and “long jumping by horse”, are statements focused on masculinity and associated with power.

<sup>5</sup> ABZ no. 554, pp. 191 ff.

<sup>6</sup> Salvini says for MUNUS, “MUNUS ‘donna’, anche determinativo di nomi o enti femminili”; that is, “MUNUS ‘woman’, also determinative of names or female bodies” (see CTU IV 554, p. 310).

<sup>7</sup> CTU I A 1-2, p. 99, A 3-9, p. 137 ff., A5-98h, p. 267, A12-6, p. 578; CTU IV CT Kb-3, p. 135. Salvini has suggested that the word could be completed with a female name as <sup>f</sup>na-ma-a x-ma-a in expression “MUNUS x-ma-a” mentioned on a bullae uncovered during Ayanis excavations (see CTU IV CB Ay-53, p. 197).

<sup>8</sup> CTU I A 3-4, pp. 131 ff., A 3-9, pp. 137 ff.

<sup>9</sup> Inscription different figures for given the number of “úedia” of this last corpus (CRU) “donne” that was translated as women. For two translated sample see. For the translation of <sup>LÚ</sup>úedia as “woman” see [x] mila 670 donne ([x] one thousand

word <sup>LÚ</sup>úedia defined women who were servants, odalisques or used for individual household duties or state projects in Urartu.<sup>10</sup>

Interestingly, we see the word <sup>LÚ</sup>úedia as <sup>MUNUS</sup>úedia on inscriptions dated to the reign of Arğišti I (785/80–756 BCE). Moreover, both expressions, <sup>LÚ</sup>úedia and <sup>MUNUS</sup>úedia, have been used on a stela belonging to the same king. Salvini has used the word “woman” for both <sup>LÚ</sup>úedia and <sup>MUNUS</sup>úedia in the translation of this stela.<sup>11</sup> The usage together of the sumerogram <sup>MUNUS</sup> meaning “woman” and the sumerogram <sup>LÚ</sup>,<sup>12</sup> pointing usually to males and male professions and used generally as a determinative for the same word (“úedia”), is an interesting situation. Here, the group of people defined by the word “úedia” should firstly be analysed. These people represent only one group of people among exiled peoples in Urartian campaign inscriptions. Generally, the number of captured people from conquered places is expressed in the thousands on inscriptions. Another detail is that the word “úedia” is not seen in inscriptions other than Urartian campaign inscriptions. Hence, to say only “captured people” or “exiled people” constitute “úedia” would be appropriate. Another detail related to the word is in the verb “úediadu(bi)”, mentioned in the Urartian inscriptions. The word “úediadu” has been translated by Salvini as “castrai(?)” or, in other words, “castration”, with reference to an ongoing tradition from past corpuses.<sup>13</sup> This locution used for defeated kings should be understood as an insult with the meaning of “turning into a woman” rather than as literally “castrating”.<sup>14</sup> Considering all these data, the fact that “úedia” was used with the meaning of “looted women” comes out. If we turn to our actual question, the usage of the determinative <sup>LÚ</sup> for “úedia” can be seen as arising from this property of the word. Here the Urartian scribe apparently used the determinative <sup>LÚ</sup>, which was widely attested,<sup>15</sup> with the word “úedia” to indicate a community of people. The flexibility in preference for <sup>MUNUS</sup> or <sup>LÚ</sup> also appears to arise from this.

The word “lutú”, which we see in Urartian campaign inscriptions beginning from the reign of Arğišti I, has also been translated as “woman” by Salvini.<sup>16</sup> This word was used only with the sumerogram <sup>MUNUS</sup>, unlike “úedia”. The word <sup>MUNUS</sup>lutú was also used together with <sup>LÚ</sup>úedia or <sup>MUNUS</sup>úedia in the Urartian inscriptions. Based on some inscriptions, the expression “lutú” was used as equivalent of the word “úedia”.<sup>17</sup> Given this, we can accept that “lutú” means “woman”,

670 women), CTU I A 3-4 Ro, 31'-38', p. 132. For another example of the translation see 15000 donne (15000 women) CTU I A 9-3 I, 18-21, p. 420.

<sup>10</sup> Hoffman 1978, pp. 65–66.

<sup>11</sup> CTU I A 8-2, Ro, 29-32, Vo, 12-14, pp. 330, 331.

<sup>12</sup> For <sup>LÚ</sup> in ABZ 330, p. 137, the explanation is “Mensch. Determinativ vor Berufund Völkernamen”; that is, “determinative of person, occupation and public.”

<sup>13</sup> For the inscriptions in which the verb “úediadu(bi)” in the Urartian language has been translated as “castrai”, in other words “castration”, by Salvini, see CTU I A 8-2 Vo, 15-16, 38-40, pp. 331–332, A 9-1.s., 13-18, pp. 416–417.

<sup>14</sup> About analysis of this verb “úediadubi”, see Çavuşoğlu *et al.* 2010, p. 158.

<sup>15</sup> The determinative <sup>LÚ</sup> was used for defining people including women in the Urartian inscriptions. For example, there are females among those defined as <sup>LÚ</sup>UN<sup>MES</sup>, generally translated as “person”, in Urartian campaign inscriptions. Again, the sumerogram <sup>LÚ</sup>MES for all people has been used at the end of the personnel list (which included weaver women) in the Toprakkale tablet.

<sup>16</sup> For the translation of this word as “donne” see CTU I A 8-3 II, 17-22 and 43-48, p. 336; For the translation of the same word as “femmine” also see CTU I A 11-3 Vo, 1-8, p. 541. Both translations mean “female”.

<sup>17</sup> The finest example of the expression “lutú” used instead of the word “úedia” occurs in the texts in the inscription of Hazine Piri belonging to Sarduri II. While the words “lutú” and “úedia” appear consecutively in the nineteenth and twentieth lines of this inscription, it is seen that the word “lutú” is used instead of “úedia” in the twenty-third and twenty-fourth lines of the same inscription (see CTU I A 9-3 I, pp. 419 ff.).

like “úedia”. Interestingly the word “lutú” is identical with last syllables of some female titles such as “šēlūtu”<sup>18</sup> (votaress) and “nargallutu”<sup>19</sup> (chief female musician) used in the Neo-Assyrian period. Among these, “nargallutu” means “looted women” like lutú.<sup>20</sup>

Another word in the Urartian language that we see related to women in the inscriptions is “sila”. This word, which was first seen on the inscription related to the vineyard founded by Minua,<sup>21</sup> has been translated as “wife or mother, sister” by König.<sup>22</sup> However, it has usually been translated “daughter” by another group of scholars because of a proposed connection with Hurrian šala/i, “daughter”.<sup>23</sup> But this word has been analysed in recent years through a Urartian rock inscription discovered in Ilandagh in Nakhchivan. On the inscription, it is written that a cow (GU<sub>4</sub>.ÁB) was sacrificed for a wife (“silae”) of the god Haldi.<sup>24</sup> Thus it is proved that the word “sila” meant “wife”.<sup>25</sup>

There are some sumerograms related to women which were not mentioned in the Urartian texts but appear on some Urartian tablets and bullae uncovered in Ayanis. The first of these is the sumerogram MUNUS.TUR, mentioned on a tablet found in Karmir Blur.<sup>26</sup> The tablet was examined by Soviet researchers, who translated this sumerogram, transcribed by them as MÍN.TUR, as “girl”.<sup>27</sup> The sumerogram was later read as MUNUS.TUR by Salvini and again translated as “girl”.<sup>28</sup> Another sumerogram, MUNUS.SIG<sub>7</sub>, has been read on two tablets found in Karmir Blur<sup>29</sup> and Toprakkale<sup>30</sup> and a bulla found in Ayanis.<sup>31</sup> Although its meaning is not known,<sup>32</sup> this sumerogram was transcribed as GAŠAN, with the meaning of “lady”, by Soviet researchers.<sup>33</sup>

## Noblewomen

We have little information about noblewomen from written sources and archaeological data belonging to the Urartian period. As yet we do not have any information about a queen or any other woman in the context of the administration of the Urartian state. However, there are a few other written documents about women who were accepted as queen.

<sup>18</sup> SAA 9, 1.7 and SAA 13, 148.

<sup>19</sup> SAA 7, 24.

<sup>20</sup> Teppo 2005, pp. 64 ff.

<sup>21</sup> CTU I A5A-1, p. 268.

<sup>22</sup> König suggested the word “sila” might mean “Gattin oder Mutter, Schwester”; in other words, “wife or mother, sister” (see HchI, p. 199).

<sup>23</sup> Diakonoff 1971, pp. 46, 61; Friedrich 1969, p. 47; Wilhelm 1976, p. 107 n. 17.

<sup>24</sup> CTU I A3-8, p. 137.

<sup>25</sup> André-Salvini and Salvini 1999, pp. 274 ff.

<sup>26</sup> CTU IV CT Kb-4, p. 137.

<sup>27</sup> For the transcription MÍN.TUR and its translation as “девушки”, in other words, “girl”, see UPD, no. 4, p. 34; UKN II, no. 456, p. 272; KUKN, no. 446, p. 376 ff.

<sup>28</sup> Salvini has translated MUNUS.TUR as “ragazza”, in other words, “girl” (see CTU IV 554 p. 310).

<sup>29</sup> CTU IV CT Kb-4 Ro, p. 137.

<sup>30</sup> CTU IV CT Tk-3, p. 148.

<sup>31</sup> CTU IV CB Ay-53, p. 196.

<sup>32</sup> Salvini (pers. comm.) has stated that he made the transcription MUNUS.SIG<sub>7</sub> but had no idea about this sumerogram.

<sup>33</sup> For the transcription GAŠAN and its translation as “госпожа”, in other words “lady”, see UPD, no. 4, p. 34; UKN II, no. 456, p. 272; KUKN, no. 446, pp. 376 ff.

Chief amongst these is the Katepant's rock inscription (today Kadembastı). This inscription has been transcribed and translated by Salvini as follows:

**CTU I: no. A 5A-1**

*Transcript*

- 1 <sup>m</sup>mì-nu-a-i-ni-e-i <sup>MUNUS</sup>si-la-a-i-e
- 2 <sup>MUNUS</sup>ta-ri-ri-a-i i-ni<sup>Gl</sup>šul-di
- 3 <sup>MUNUS</sup>ta-ri-ri-a-ḫi-ni-li ti-i-ni
- 4 <sup>m</sup>mì-nu-a-i-ni-e-i <sup>MUNUS</sup>si-la-a-e
- 5 <sup>MUNUS</sup>ta-ri-ri-a-i i-ni<sup>Gl</sup>šul-di
- 6 <sup>MUNUS</sup>ta-ri-ri-a-ḫi-ni-li ti-i-ni

*Translation*

It has been translated as:

- (1) “Of Minua’s wife, (2) of Tariria (is) this vineyard. (3) ‘Foundations-of-Tariria’ is (the) name” (4-6) (repeated twice).<sup>34</sup>

From the inscription we learn that there is a vineyard in the name of Tariria, wife of Minua,<sup>35</sup> situated in Kadembastı, located on the route of Minua (today Şamran) Canal, which was built by King Minua (810–785/80 BCE). Minua, who had the canal built in his name, apparently founded a vineyard in the name of his wife. It is known that a similar approach was taken by Mesopotamian kings.<sup>36</sup> This Tariria inscription also suggests that the right to own property existed, since there was personal property in the name of the Urartian queen.

We see the name of another Urartian queen in a short inscription on a decorated gold object,<sup>37</sup> uncovered in the excavations of Ayanis Fortress (<sup>m</sup>Rusaḫina <sup>KUR</sup>Eidurukai in the Urartian language).

**CTU IV: no. B 12-A**

- <sup>MUNUS</sup>qa-qu-li <sup>MUNUS</sup>.LUGAL ta-na-a-ši  
“(Of) Qaquli, the queen, property”<sup>38</sup>

<sup>34</sup> The original of the translation is Italian (CTU I A 5A-1, p. 268): “(1) Della sposa di Minua, (2) di Tariria (e) questa vigneto. (3) ‘Creazione di Tariria’ (e il suo) nome” (4–6 idem).”

<sup>35</sup> We have mentioned that it became certain that the word “sila” in the Urartian language meant “wife” through the discovery of the Ilandagh inscription (André-Salvini and Salvini 1999, pp. 274 ff.). Salvini states that the Tariria mentioned in the inscription of Kadembastı was the wife of Minua (see Çilingiroğlu and Salvini 2012, p. 107).

<sup>36</sup> The Babylonian king Nebuchadnezzar II (604–562 BCE) founded the hanging gardens, where branches were hanging on the vaults, for his wife (see Wiseman 1983, p. 139).

<sup>37</sup> The gold object is a special belonging of an Urartian woman as far as is understood from the inscription on it. The length of the object is 20.6 cm, its diameter is 1.35 cm and its weight is approximately 60 gm; the wooden haft has not been preserved. The cylindrically-shaped rod has been decorated with 12-leafed rosettes, and an 18-row tree of life, spiral-shaped sprouts and pomegranate motifs (see Çilingiroğlu and Salvini 2012, pp. 99–111, figs 2–4).

<sup>38</sup> The original translation is Italian (see CTU IV B 12A, p. 64): “(Di) Qaquli, la regina, proprietà(?)”.

It has been suggested by Salvini that Qaqli mentioned in the inscription was the wife of the Urartian king Rusa II (685–645 BCE).<sup>39</sup> On this short inscription, “queen” has been expressed using the sumerograms “MUNUS.LUGAL”. The sumerograms MUNUS.LUGAL (Woman-King), first seen here among the Urartian written sources, mean “queen” when used together. The usage of MUNUS.LUGAL appears in documents of the second millennium rather than Neo-Assyrian documents, contemporary with Urartu.<sup>40</sup> Thus, we are informed about the existence of two women and two queens, called Tariria and Qaqli, in the Urartian written sources found so far.

If we consider how names of queens such as Tariria and Qaqli are mentioned in the inscriptions, it might be thought that the Urartian kings were monogamous. However, as seen in the example of King Minua, the fact that women were brought to a royal harem (in Tuşpa) as campaign booty also reveals that the Urartian kings had harems including many women.<sup>41</sup>

We know that daughters of kings were given to the kings of neighbouring states as wives, for the purpose of forming alliances, in Neo-Assyria.<sup>42</sup> Grekian has suggested that there was the same arrangement between Urartu and Assyria.<sup>43</sup> He argues that one of the last kings of Neo-Assyria, Assurbanipal, appears to have given his daughter to the Urartian King Sarduri III as wife. Grekian bases his opinion on dedications to Sarduri III in tablets belonging to the reign of Assurbanipal.<sup>44</sup>

Although it is so far not known exactly to which kingdoms’ dynasty-members the Urartian kings gave their daughters or sisters as wives, a Urartian woman is mentioned on the throne of country Habhu<sup>45</sup> in a Neo-Assyrian letter: “From what you have done, we know well enough that you killed her, a woman of Habhu; and afterwards you ‘pour oil’ upon it, saying: ‘The [Urartia]n killed her.’ A Urartian woman may not sit upon the throne!”<sup>46</sup> The identity of the Urartian woman mentioned in this text as sitting on the throne of Habhu is not known; however, Grekian has proposed that she may have been a Urartian princess.<sup>47</sup>

A clay tablet found in Karmir Blur provides some information about the process of giving a woman as wife in a Urartian palace. The translation and transcription of this tablet is given below:

<sup>39</sup> Çilingiroğlu and Salvini 2012, p. 107.

<sup>40</sup> Salvini says for the term MUNUS.LUGAL: “It is well known in the Hittite cuneiform texts and on the dynastic seals, and in Akkadian texts in Ugarit, but also in Mari, Nuzi, and Alalah (reading *šarratu*), again in apposition to a divine name” (see Çilingiroğlu and Salvini 2012, p. 106).

<sup>41</sup> Çavuşoğlu *et al.* 2010, pp. 153 ff.

<sup>42</sup> We know that the Neo-Assyrian king Esarhaddon (618–627 BCE) gave his daughter *Šērū’a-ētirat* to the Scythian king Bartatua as wife (SAA 4, no. 21).

<sup>43</sup> For dynastic marriages between Urartu and neighbouring kingdoms see Grekian 2008, pp. 292–309.

<sup>44</sup> Grekian 2008, pp. 301 ff.

<sup>45</sup> For the suggestion that Habhu was a general name used for the mountainous area in the north of Assyria, see Radner and Schachner (2001, pp. 761–762).

<sup>46</sup> Lanfranchi and Parpola 1990, no. 108, pp. 85–86.

<sup>47</sup> Grekian 2008, p. 300.

## CT Kb-3 Ro

*Transcript*

- 1 LUGAL-še: a-li: ti-i-e  
 2 m<sup>D</sup>hal-di-bura(IR)-di L<sup>U</sup>KÜ<sup>MEŠ</sup>  
 3 m<sup>a</sup>-lu-a-ni-ni L<sup>U</sup>MUḪALDIM<sup>MEŠ</sup>  
 4 za-ni-da-bi: TI DINGIR: gu-ni  
 5 MUNUS<sup>si</sup>-la-a: šú-se-e  
 6 m<sup>mu</sup>-i-da-a-i L<sup>U</sup>MUḪALDIM:  
 7 MUNUS-e ma-nu-ú-bi:  
 8 É.GAL-ni [ḫi]-ni-[e]  
 9 LUGAL-še bi-du-ú-ni  
 10 m<sup>a</sup>-l[u]-a-ni-gi L<sup>U</sup>MUḪALDIM  
 11 mi-i a?-[l]u?-[š]á-i-ni:

*Translation in Italian*

“Il re dice: di’  
 a Ḫaldi-bura, l’orefice,  
 Aluani, il fornaiio:  
 Che il dio ti serbi in vita;  
 moglie mia (oppure “una moglie”)  
 del sig. Muida, il panettiere  
 la/una donnac’e  
 (nella?) fortezza ora(?)  
 Il re la(?) ha restituita(?)  
 ad(?) Aluani, il panettiere  
 non...”

## CT Kb-3 Vo

- 1 bi-[di]?..... -e-[e]? .....  
 2 a-l[i]-ú-ni ... ”

## CT Kb-3 Sigillo

- 1 m<sup>e</sup>-ri-me-na[- m<sup>a</sup>]r?-[giš]? (1) “di Erimena, [figlio di A]rgiš<ti>(?)  
 2 ]-l<sup>i</sup>-e | K[IŠIB]? L<sup>U</sup>a-[šu]-li? (2) sigillo del funzionario ašuli(?)”

*Translation of the front of the tablet*

“The king says, to Ḫaldi-bura (who) Goldsmith, (about) Aluani (who) Baker, That God keep in life, My wife (or “a wife”), Mr. Muida (who) Baker, the-a woman there (in?) fortress now (?) / The king has returned to Aluani (who) baker does not” [ARt]

*Translation from the tablet seal*

- 1- Argišti [oğlu] Erimena  
 2- The seal of official ašuli

From the text above, the king appeals to a person called Ḫaldi-bura, qualified as a goldsmith<sup>48</sup> or man of money (bookkeeper) (L<sup>U</sup>KÜ<sup>MEŠ</sup>).<sup>49</sup> From the inscription in the seal impression under the tablet, the king who gave the commandment is Erimena, son of Argišti. The commandment includes the detail that a woman was given to a bread maker (L<sup>U</sup>MUḪALDIM), called Muida,

<sup>48</sup> Salvini says for L<sup>U</sup>KÜ<sup>MEŠ</sup> “l’orefice” in other words “goldsmith” (see CTU IV CT Kb-3 Ro, p. 135).

<sup>49</sup> For L<sup>U</sup>KÜ<sup>MEŠ</sup> or L<sup>U</sup>KÜG<sup>MEŠ</sup>, the translation has been given as “человекуденег”; that is, “man of money” (see UPD, no. 3, p. 33; UKN II, no. 457, pp. 272–273; KUKN, no. 433, pp. 368–369).



as wife. Further, the king also commanded the return of the same woman to another bread maker, Aluani. It is not known who this woman was or why she was given to another person; however, the tablet indicates that there was a dispute over the woman and that the king became involved.

A Urartian tablet which was uncovered in Karmir Blur and mentions the abduction of a girl indicates that one noblewoman probably had a male slave.

#### CT Kb-4 Ro

#### *Translation in Italian*

- |    |  |   |
|----|--|---|
| 1  | [ <sup>m</sup> x-x-x]-še: b[a]-ú-še                                  | “[Il sig. x] l’ordine                       |
| 2  | [ši-ú]-ni: ti-i-e  | ha riferito: di’                            |
| 3  | [ <sup>m</sup> x]-x-li-i-di <sup>LU</sup> NA <sub>4</sub> .DIB-d[i?] | al sig. x-li, il ‘detentore del sigillo’    |
| 4  | [ <sup>m</sup> t]u?-ur <sub>4</sub> -gi-i <sup>LU</sup> NA.KAD       | (ed a) Turgi, il pastore:                   |
| 5  | [z]a-ni-da-bi TI DINGIR: gu-ni                                       | Che il dio ti serbi in vita;                |
| 6  | <sup>m</sup> :ta-ta-a-še <sup>LU</sup> IR MUNUS. SIG <sub>7</sub> -i | Tata, il servo della MUNUS.SIG <sub>7</sub> |
| 7  | MUNUS.TUR: ir-bu-ni: ú-i   | ha rapito la ragazza. Non                   |
| 8  | u+e-er-šu-še: a-ri-a-ni!   | .....                                       |
| 9  | hi-ni: a-la-gi: za-de-e  | ora.... fai                                 |
| 10 | ú-ši-e: at-še-e: a-ri  | ..... dai”.                                 |

#### CT Kb-4 VoSigillo

#### *Translation in Italian*

- |   |   |                                    |
|---|---|------------------------------------|
| 1 | sa-a-i <sup>m</sup> ru-sa-ši <sup>m</sup> ru-sa-a-i <sup>m</sup> r[u- | “Di Rusa, figlio di Rusa,          |
| 2 | a-šu-li KIŠIB <sup>LU</sup> a-šu-li                                   | sigillo dello ašuli” <sup>50</sup> |

#### *Translation of the front of the tablet*

“[Mr. x] the order, reported: of, Mr. x-li, the keeper of the seal (and) Turgi (who) shepherd[AR<sub>1</sub>]:/ That God keep in life, Tata (who) the servant of MUNUS.SIG<sub>7</sub>, has kidnapped the girl. Not, hour.... do /.....from”

#### *Translation from the tablet seal*

- |   |                    |
|---|--------------------|
| 1 | Rusa, son of Rusa, |
| 2 | Seal of ašuli      |

As in the first tablet, the king<sup>51</sup> assigns a person to an event occurring in the text here. This person is named “Turgi” and is given the title of “shepherd”, <sup>LU</sup>NA.KAD. Most remarkable is the event itself. It is the abduction of a girl (MUNUS.TUR) by a male slave called Tata, who was subject to a person with the title MUNUS.SIG<sub>7</sub>, understood to be a woman. Ownership of a male

<sup>50</sup> CTU IV CT Kb-4, p. 137.

<sup>51</sup> The broken part [<sup>m</sup>x-x-x]-še in the beginning of the tablet can be completed as LUGAL-še or “king”, because both the text of the tablet and the marking part are in harmony with other Urartian tablets beginning with “king” (LUGAL).

slave by a woman (MUNUS.SIG<sub>7</sub>) is a significant detail in the text. This woman is likely to have been a courtier or a person with status. As well, the intervention of the king in the matter of the abduction of the girl strengthens the possibility that this event occurred in the palace.

Besides written sources, tombs from the Urartian period uncovered during archaeological excavations also provide information about noblewomen. Hence, these findings are quite important for understanding the situations of women in Urartian society. The burials of Urartian noblewomen found so far were in graves near to cities. Exceptionally, 37 burned skeletons, most of which were of women in a room (harem?), were discovered in the excavations of Giriktepe Palace, where a ceiling collapsed as the result of a fire. The excavator claims that the skeletons with beads, pins and earrings here were women.<sup>52</sup> At least some of them may have been noblewomen.

In grave A no. 3 in Muş/Kayalidere, a skeleton was reported. Jewellery made of silver and bronze was found on the skeleton. Although an anthropological study has not been carried out, the excavator has stated that the skeleton belonged to a woman, based on burial findings, and that this woman lived in the palace of Kayalidere.<sup>53</sup>

Additionally, skeletons buried with clothing and jewellery were found in graves nos. II and III in Erzincan/Altuntepe.<sup>54</sup> It has been determined by anthropological examinations that the skeletons belonged to women.<sup>55</sup> It has been stated that the woman in stone cist grave no. III was of the palace.<sup>56</sup> The inner and outer parts of the trough-shaped sarcophagus in which her skeleton was found are quite well crafted. The woman's garment is adorned with button-shaped ornaments and gold sequins. Also, pipe/barrel-shaped beads have been reported in her necklace of gold and precious stones. Near the sarcophagus, a table made of walnut, a tile vase and ruined wooden furniture parts were uncovered.<sup>57</sup> In light of the data mentioned above, we agree with the suggestion of the excavators that the burials found in Kayalidere and Altuntepe could be of women belonging to the palace.

Some figures thought to be noblewomen are found in Urartian visual arts. In particular, female figures sitting on thrones are engraved on metal belts (Fig. 1: A).<sup>58</sup> These figures have been decorated in such a way that the dress of the figure was engraved meticulously, the head of the figure was covered by a long cloth, the figure held a bowl in her raised right hand, and generally she held a paternoster consisting of a series of beads in her left hand. Other female figures are seen serving the women, in front of and behind them. Although the way the serving women are clothed does not differ much from the woman sitting on the throne, they are distinguished by their uncovered heads. Generally, while the figure in the foreground is concerned with the dining table, the one behind waves an object like a fan.

<sup>52</sup> Balkan 1964, p. 241.

<sup>53</sup> Burney 1966, p. 110.

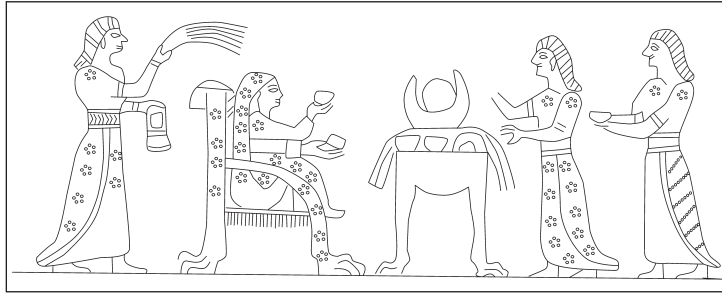
<sup>54</sup> Özgüç 1969, pp. 15–22.

<sup>55</sup> In the anthropological examination, Çiner says: "The female skeleton no. 2 from Erzincan-Altuntepe which is long-headed and in medium-height has morphological characters seen mostly in examples of Mediterranean type. Forehead that is like camber is slightly perpendicular and weak. In Calvaria with no. 1 from Altuntepe which is very long-headed, the forehead is backward and growth of glabella is in medium level." For detailed information, see Çiner 1965, pp. 225 ff.

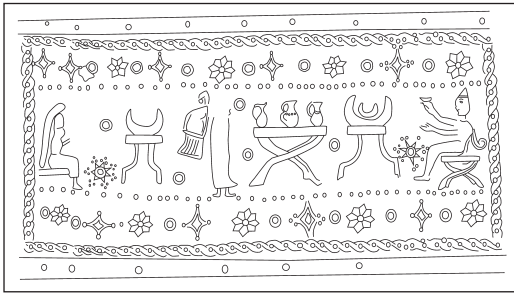
<sup>56</sup> Özgüç 1969, p. 26; Çevik 2000, p. 79.

<sup>57</sup> Özgüç 1969, pp. 18–22.

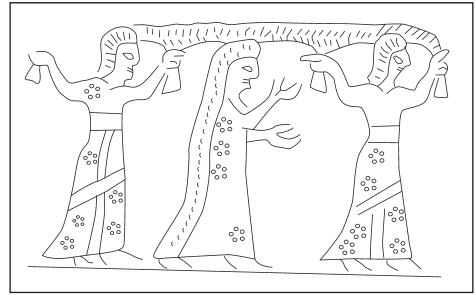
<sup>58</sup> Kellner 1991a, pl. 67/256, pl. 69/260, 262, 263, 269, pl. 70/279, 282; Seidl 2004, p. 143, figs Sm1-13.



A. (redrawn after Seidl 2004, p. 143, sm-9)



B. (redrawn after Kellner 1991a, detail from pl. 60-61/237)



C. (redrawn after Seidl 2004, detail from from pl. A/3)

Fig. 1. Royal or noble women figures on metal belt fragments.

In a banquet scene on a fragment of another belt, exhibited in Adana Archaeological Museum, a female figure<sup>59</sup> on the far left and a male figure on the right sit on taborets. At the centre of the scene there are three tables full of food and drinks. Also at the centre of the scene there is a figure who is probably serving the man and woman (Fig. 1: B).<sup>60</sup> Both the man and the woman hold bowls in their right hands. It is known that Ashurbanipal (668–627 BCE), one of the kings of Neo-Assyrian state, which was contemporary with Urartu, was thus described together with his wife in a banquet scene.<sup>61</sup> But we as yet have no data to support the view that the figures engraved on the Urartian belt represent a king and his wife, as in Neo-Assyria. Even so, it is probable the Neo-Assyrian situation also applied in contemporary Urartian society. It is known that banquet scenes were peculiar to the nobles in the Near East. It can be said that the scene described on this belt depicted Urartian nobles.

On another belt, a woman is depicted as if walking under a covering held by two servants (Fig. 1: C).<sup>62</sup> This covering is likely to have been used for protecting her from occurrences such

<sup>59</sup> This figure has been engraved in a stylised manner. Other feminine features such as the breast cannot be seen exactly. However, we think with reference to the headgear that this figure could be a woman.

<sup>60</sup> Kellner 1991a, pl. 61/237.

<sup>61</sup> Collins 2008, p. 137.

<sup>62</sup> Seidl 2004, pl. A/3.

as sunshine or rainfall. The woman under the covering exactly complies with the examples of noblewomen above in terms of her clothing. So it can be said that this woman was also noble. Additionally, different views about the enthroned female figures on the belts have been suggested in recent studies about Urartian women. Among these, Çevik has stated that they were high-status women rather than goddesses.<sup>63</sup> Grekyan has suggested that the women could be queens or goddesses.<sup>64</sup> The possibility that these female figures are noblewomen seems more likely.

### Non-Elite Women

Because of a deficiency of written data, our knowledge about non-noble women in Urartian society mostly depends on discoveries from public necropolises. To date, some data has been obtained from public necropolises such as Van-Altıntepe, Van-Kalecik, Iğdır, Dedeli and Liç. These necropolises were seriously damaged by treasure hunters before scientific archaeological excavations took place. Skeletons were sometimes found together with *in situ* burial gifts in the later excavations.

As a result of scientific archaeological excavations in the necropolis of Van-Altıntepe, located about 2 km north of Van Castle, skeletal remains belonging to 152 individuals were found in a total of 38 graves. Anthropological examinations were carried out on the remains of the skeletons and as a result of this it has been stated that female individuals constituted 38 per cent of paleodemographical distribution in the general population.<sup>65</sup> A hair spiral was found at the level of the ear of a skeleton belonging to a woman of about 35 years in grave no. TM-2.<sup>66</sup>

During scientific study carried out in the necropolis of Kalecik, located about 4 km north of Van, 25 skeletons in total were found. Human bones were discovered in the graves, as well as many fragments. Paleo-anthropological analysis carried out on the bones indicated that a total number of 36 female skeletons were found.<sup>67</sup> In particular, in grave no. Ka.3 a silver hair spiral was located right next to the skull of one of the female skeletons, and a poppy-headed bronze pin was found at shoulder-height of the other.<sup>68</sup>

The skeleton of an adult woman in an inhumation burial was found in the place called Point 1 in the Iğdır-Melekli (Malaklı) Urartian public necropolis. Although no anthropological examination has been carried out, the excavator has suggested that the skeleton is that of an adult woman.<sup>69</sup> In one of three simple inhumations examined in the necropolis of Patnos-Liç, the body was laid on its back in the grave. On the skeleton a hair spiral and a pin were found, along with fragments of a bronze belt on the thigh bone. The excavator has stated on the basis of the thinness of the bones that this individual was a woman.<sup>70</sup>

<sup>63</sup> Çevik 2012, p. 72.

<sup>64</sup> Grekyan 2008, p. 294.

<sup>65</sup> Erkman *et al.* 2009, p. 180.

<sup>66</sup> Ayaz 2006, p. 29, pl. 21, figs 98–99.

<sup>67</sup> Yılmaz *et al.* 2008, pp. 31–32.

<sup>68</sup> Çavuşoğlu *et al.* 2008, p. 275.

<sup>69</sup> Barnett 1963, p. 155.

<sup>70</sup> Ögün 1978a, pp. 65 *ff.*; 1978b, pp. 673 *ff.*

Two underground chamber tombs were discovered near Patnos-Dedeli Village. Some skeletons were found in the tomb Dedeli no I. Although no anthropological research has been carried out on the bones, the excavator has suggested that the skeleton with a sword and a bow on it belonged to a man, and the nearby skeleton with some jewellery on it belonged to a woman. Furthermore, the excavator has claimed that the female skeleton was the wife of the man. At the entrance of the same tomb, the skeleton of a girl was found. It has also been stated that the corpses were covered by fabric. The excavator has proposed in the light of these facts that this chamber tomb was a family burial.<sup>71</sup>

A chamber tomb was uncovered in the excavations around the outer city in Ayanis Fortress. As a result of works carried out in the rectangular-planned and stone-walled chamber tomb, a human skeleton laid in the northeast-southwest direction, facing southward and buried together with burial gifts, was discovered.<sup>72</sup> The burial location in the outer city, as well as the simple inhumation, indicates that this burial was a public tomb.

When we look at the burials believed to belong to the public, it is clearly seen that there are some jewellery such as bronze earrings, belts, hairclips, bracelets, et cetera on many women. Except for the Dedeli tomb, which is understood to be a family tomb, women were buried singly.

### Women as Captives

We learn from written sources that the Urartian kings subjected a large number of captured people to forced migration during their military campaigns to different countries. Thousands of women and children were forced to migrate as well as men (**Map 1; Table 1**). Human migration policy, beginning in the co-regency period of Išpuini and his son Minua (820–810 BCE), reached its peak during the reigns of Argišti I (785/80–756 BCE) and Sarduri II. It became something of a state policy to bring a great number of captive women together with booty to the land of Urartu during military campaigns against the surrounding regions. In addition, it is understood from some inscriptions that women were distributed as booty to members of the Urartian army who had joined the battle. There is an expression on the subject in chronicles dated to the reign of Sarduri II, as follows: “Sarduri says: ...I separately gave men and women to my soldiers....”<sup>73</sup> In another inscription belonging to the same king, the same idea is expressed just after a tally of youths, men and women who were captured together with much war booty: “This was (it fell) to the king, without what the troops raided and separately took away.”<sup>74</sup>

Furthermore, a few inscriptions which are dated to the reign of Minua and duplicate each other mention transportation of women from campaigns to the harem<sup>75</sup> of Urartu in Tushpa (Tušpa). There is an expression in these inscriptions as follows: “Minua, son of Išpuini, [says:

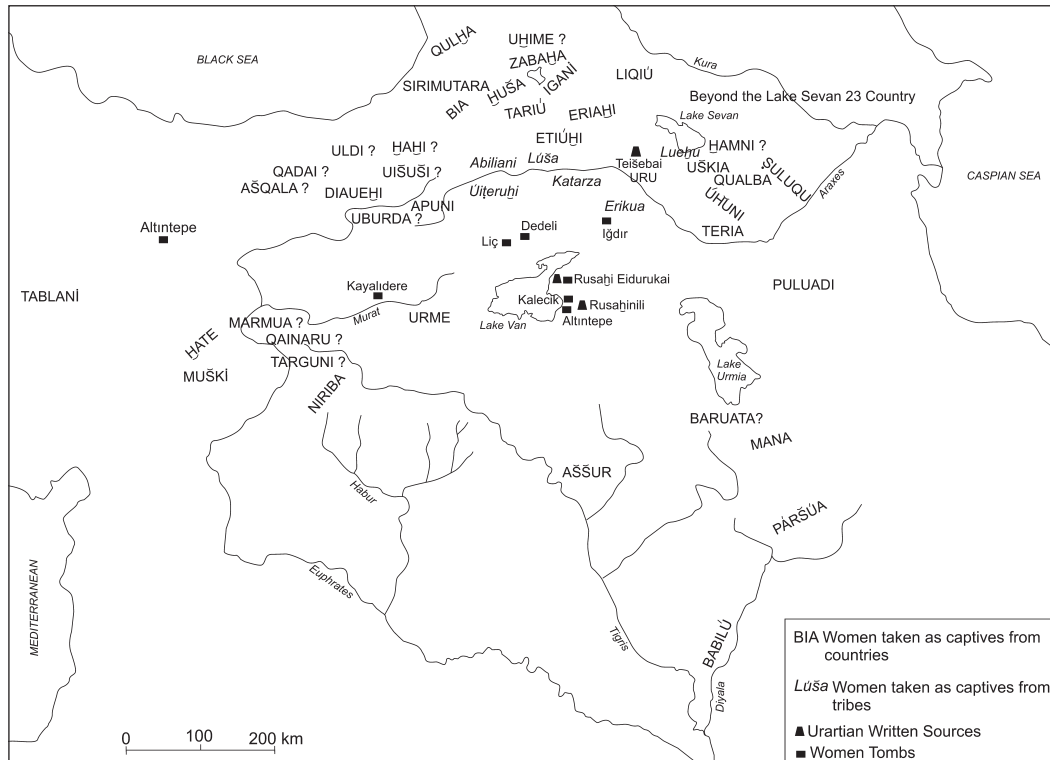
<sup>71</sup> Ögün 1978a, pp. 65 ff; 1978b, pp. 673 ff.

<sup>72</sup> Çilingiroğlu and Erdem 2009, pp. 6–7. During the interviews with the excavator, it was stated that this skeleton belonged to a woman but there is no anthropological evidence about this.

<sup>73</sup> The translation by Salvini is as follows: “Sarduri dice: separatamente uomini e donne detti alle truppe” (see CTU I A9–3 VI, pp. 428 ff).

<sup>74</sup> The translation by Salvini is as follows: “Questo venne (spettò) al re, senza ciòche la trupparazzio e separatamente porto via” (see CTU I A 9–1 I.s, p. 417).

<sup>75</sup> The existence of the harem in the Urartian Kingdom is known through architectural remains as well as written sources (for the harem in Urartu, see Çavuşoğlu *et al.* 2010, pp. 153–168).



Map 1. Data from Urartian geography regarding women.

‘harem? of city Tušpa (where) no king ever before? Many women had brought indeed Minua, son of Išpuini (scil.did) [from] the city of Luhiuni; [a group of women and men] in? city of Tušpa...’.<sup>76</sup> The women mentioned here were brought from the royal city Luhiuni, belonging to the tribe of Erukua, north of the land of Urartu.

We don’t know more of the fates of women brought forcibly to Urartu than that they were distributed to soldiers who joined the battle and transported to the royal harem of Urartu. The women may have been used in many professions, probably mainly agricultural activities as well as individual household duties in Urartian society.<sup>77</sup>

Many women brought from different cultures and nations were likely to have been assimilated into the Urartian population in terms of language, religion, tradition and customs, et cetera. Additionally, we think that the Urartian state had political influence on the countries and nations from which the women came through this assimilated population.

<sup>76</sup> The translation in Italian by Salvini is as follows; “Minua, figlio di Ispuini, [dice: lo harem’ della? città di Tuspa (dove) mai alcun re prima? tante donne aveva portato, invero Minua, figlio di Ispuini (scil. lofece) [dalla] città di Luhiuni; [un gruppo di donne e uomini] nella? città di Tuspa” (see CTU I A5–2A, A5–2B, A5–2C, A5–2D, A5–2E, pp. 184–189).

<sup>77</sup> Hoffman 1978, pp. 65–66.



| Kings  | Women  | Country and Tribe   | Text (CTU)   | Total  |
|--|--|---|--|--------|
| Co-regency of İspuini and Minua (820-810 B.C.) | (?) 620 Women<br>(?)160 Women  | Etiúhi, Katarza, Lušá and Uiteruhi<br>Pársúa  | CTU I: A-3-4<br>CTU I: A-3-4-9   | 780    |
| Minua (810-785/780 B.C.)                       | ? Women  | Etiúhi and Erikua   | CTU I: A 5-2 A; A 5-2 B;<br>A 5-2 C; A 5-2 D; A 5-2 E;<br>A 5-2 F  | ?      |
| Argisti I (785/80-756 B.C.)                    | 1604? Women<br>23280 Women<br><br>18057 Women<br><br>8497 Women<br><br>? Women<br>6200 Women   | Qadai, Aşqala, Uldini<br>Bia, Hušá, Tariú, Zabaha,<br>Sirimutara, Apuni, İgani,<br>Uiteruhi<br><br>Hate, Niriba, Hatina,<br>Marmua<br><br>Etiúhi, Uburda, Uisusi,<br>Hahi<br><br>Urme, Tariú<br>Etiúhi        | CTU I: A-8-2<br><br>CTU I: A-8-3 I<br><br>CTU I: A-8-3 II<br><br>CTU I: A-8-3 II<br><br>CTU I: A-8-3 V<br>CTU I: A-8-6   | 57638  |
| Sarduri II (756-730 B.C.)                      | 7751 Women<br>25000 Women<br>15000 Women<br>6500 Women<br>6408 Women<br>9110 Women<br>15553 Women<br>4928 Women<br>23200 Women<br><br>? Women<br>? Women | Rihišá<br>Babilu, Baruata<br>Etiúhi, Liqúi<br>Urme<br>Qulha, Hušá, Abiliani<br>Qulha, Uiteruhi<br>Puluadi, Eriahi<br>Mana, Eriahi<br>Uelikuhi, Qualbani, Uhini,<br>Teria, Uškia, Hamni<br><br>Uhimea<br>Luehu | CTU I: A-9-1.1.s.<br>CTU I: A-9-3 I<br>CTU I: A-9-3 I<br>CTU I: A-9-3 I<br>CTU I: A-9-3 II<br>CTU I: A-9-3 III<br>CTU I: A-9-3 IV<br>CTU I: A-9-3 V<br>CTU I: A-9-3 VI<br><br>CTU I: A-9-5<br>CTU I: A-9-6 | 113450 |
| Rusa I (730/713 B.C.)                          | ? Women  | Beyond the Lake Sevan<br>23 Country   | CTU I: A-10-2  | ?      |
| Argisti II (713-? B.C.)                        | ? Women  | Etiúhi, Sulugu  | CTU I: A-11-3  | ?      |
| Rusa II (673/672 B.C.)                         | ? Women  | Aşşur, Targuni, Etiúhi,<br>Tablani, Qainaru, Hate,<br>Muški, Şiluqu   | CTU I: A-12-1 VI<br>CTU I: A-12-4 II   | ?      |
| Overall Total:                                 |  |   |  | 171868 |

Table 1.  
Uartian textual evidences for women as captives.

It is possible to see policies similar to those of the Uartians in captured communities being forced to migrate to Neo-Assyria, a culture contemporary with Urartu, after military campaigns. The subject of a tablet belonging to the Assyrian King Sargon II is Uartian captive women in the land of Assyria. In this tablet, there are such expressions as:

.....The king's word to Nabû-duru-ušur: Right now I am sending the royal bodyguard Mannu-ki-Aššur to those Urartian emissaries: he will bring them to Urzuhina in advance of these captives who are eating bread in your charge. As for you, the day you see this letter, summon these captives; they should be on the alert, standing by, and the day Mannu-ki-Aššur the bodyguard writes to you: "The emissaries have arrived in Urzuhina, set the captives in motion," assemble the captives, go to Urzuhina, and entrust them[...]to the[city over]seer of Urzuhina. [I am also sending] Aššur-balti-niše (with the following orders): "Go [.....] in the presence [of.....] and assi[st] them!" Indeed, the [Urartia]n women who[are] in your charge with[these] captives in Arrapha should not [go]with the captives! But now the women whom [he is see] king, taking out and bringing to[...] should live with these women in Arrapha, and should be given bread to eat and water to drink until I come. The palace chariots which are bringing these women are to provide the people with bread and the teams with fodder.<sup>78</sup>

Through this tablet, we learn that Neo-Assyria took Urartian women as captives. It is also mentioned that Urartian women were taken by royal chariots between Assyrian cities such as Arrapha and Urzuhina, under the supervision of Neo-Assyrian royal guards. Although it is not understood who these women were, it can be said — considering the measures taken — that they were important people. There has also been some commentary about the fact that these women were noble or royal women in Urartu.<sup>79</sup> Besides this, it is known that wives and harems of kings, seized during some campaigns, were incorporated into the Assyrian harem.<sup>80</sup> The Urartian women captured by Neo-Assyria may also have been exposed to such a fate. Despite the above, we still do not have complete knowledge of the fates of the women taken to Assyria.

### Women with Professions

Urartian society consisted of a mixture of native populations and members of nations forced to migrate as a result of campaigns. The contribution made to production in the hard Urartian geography by newcomers accustomed mainly to animal husbandry and partly to agriculture is likely to have been very significant. Here, the role of women is important. When written sources and visual arts are examined, it can be seen that there were some women with occupations which were part of the socio-economic life of the Urartian state.

In a tablet found in Van-Toprakkale, a personnel list of Rusaḫina<sup>81</sup> palace is given. The mention of "66 <sup>MUNUS</sup>GAD -hi-e" in the second category of the list has been translated as "66 weaver women."<sup>82</sup>

<sup>78</sup> Parpola 1987, no. 10.

<sup>79</sup> Grekhan 2008, pp. 296 ff.

<sup>80</sup> An inscription of the Neo-Assyrian King Sanherib, who carried out a military expedition to Babylon, claimed that he had attacked the palace of King of Babylon, which sheltered Marduk-apla-iddina's wife, palace women, female stewards, eunuchs, courtiers, attendants, male singers, female singers, and palace servants. (RINAP 3, no.1, p. 34). The same king brought also daughters, palace women, male and female singers of the king of Jerusalem (Hezekiah), as well as many valuable goods to the royal city Niniveh during his campaign against Syria-Palestine (RINAP 3, no. 22, p. 177). In Neo-Assyrian inscriptions the existence of many Hittite, Aramean and Tyrant musicians in the harem of Ashurbanipal (668-627 BCE) is mentioned (Oded 1979, p. 689).

<sup>81</sup> The palace of Rusaḫina was founded by the Urartian king Rusa II (first half of the seventh century BCE) in Toprakkale near Van.

<sup>82</sup> This expression has been translated by Diakonoff as "68 ткачих (?)" (see UPD, no. 12, p. 39). The same expression has been read by Salvini as "66 tessitrici(?)" (see CTU IV CT Tk-1, p. 145). Although the numbers are read differently, both expressions mean "weaver".

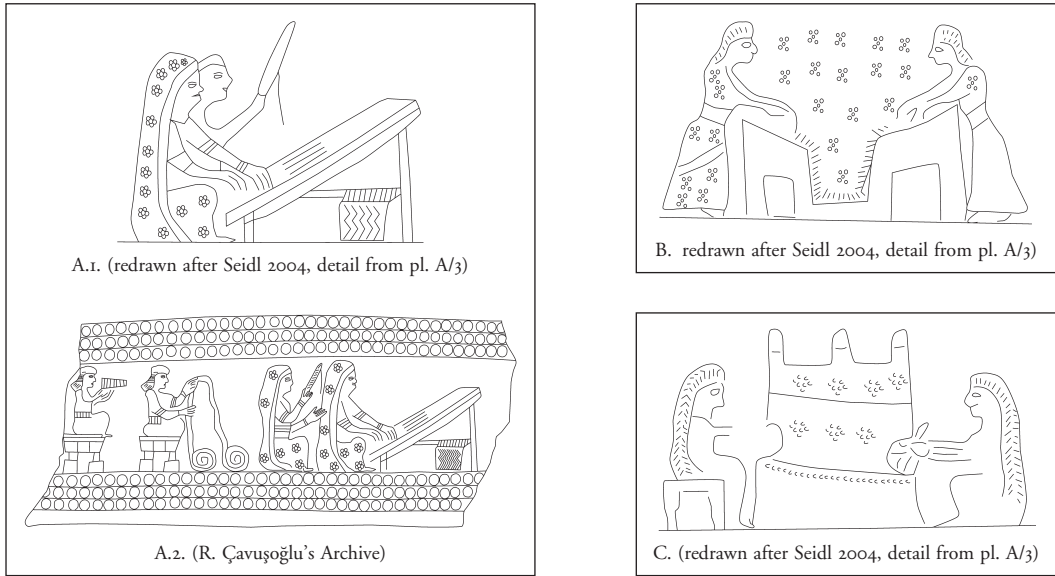


Fig. 2. Female figures in textile professions on metal belts.

MUNUS<sup>83</sup>GAD, understood to be a sumerogram, is found only in this tablet among the Urartian texts so far. The presence of the sumerogram MUNUS indicates that these weavers were women.

Additionally, on a few fragments of Urartian metal belts, weaving looms and weaver women (Fig. 2: A), women roving wool(?) (Fig. 2: B),<sup>83</sup> women slivering wool and also women weaving a rug or a felt(?) (Fig. 2: C)<sup>84</sup> appear.<sup>85</sup> Considering the images it can also be said that there was a division of labour among the women weaving. Based on available data, we understand that weaving was carried out by women connected to the palace in Urartian society. It is known that weaving was mainly carried out by noblewomen in the Near East; the best examples of this are represented by a few reliefs belonging to the Late Hittite<sup>86</sup> and Elam civilisations.<sup>87</sup>

Additionally, there are female musicians depicted on metal belts (Fig. 3: A). There are tambourines, castanets, bowls, oboes (flutes), lyres and saz in the hands of the women as musical instruments.<sup>88</sup>

<sup>83</sup> Seidl 2004, p. 137.

<sup>84</sup> Seidl has stated that the object in this scene could be a fireplace or an oven (2004, p. 137). However, there are fuzzy rosette-like decorations described on a belt fragment. It is seen that same adornments were used in this scene. Furthermore, the appearances of one of the women on a taboret and the other in crouching position have led to speculation that the activity being carried out took a long time. Additionally, although there might be a person working in the inlet of a fireplace or oven, the presence of two people working together around an object probably calls to mind weaving a sample of textile or rug.

<sup>85</sup> Kellner 1991a, pl. 70: 282, pl. 71: 282; Seidl 2004, pl. A-3.

<sup>86</sup> Darga 1992, p. 318, fig. 304.

<sup>87</sup> Amiet 1966, p. 540, fig. 413.

<sup>88</sup> Anlağan 1998, p. 61; Seidl 2009, pp. 607–619, figs 1–17.

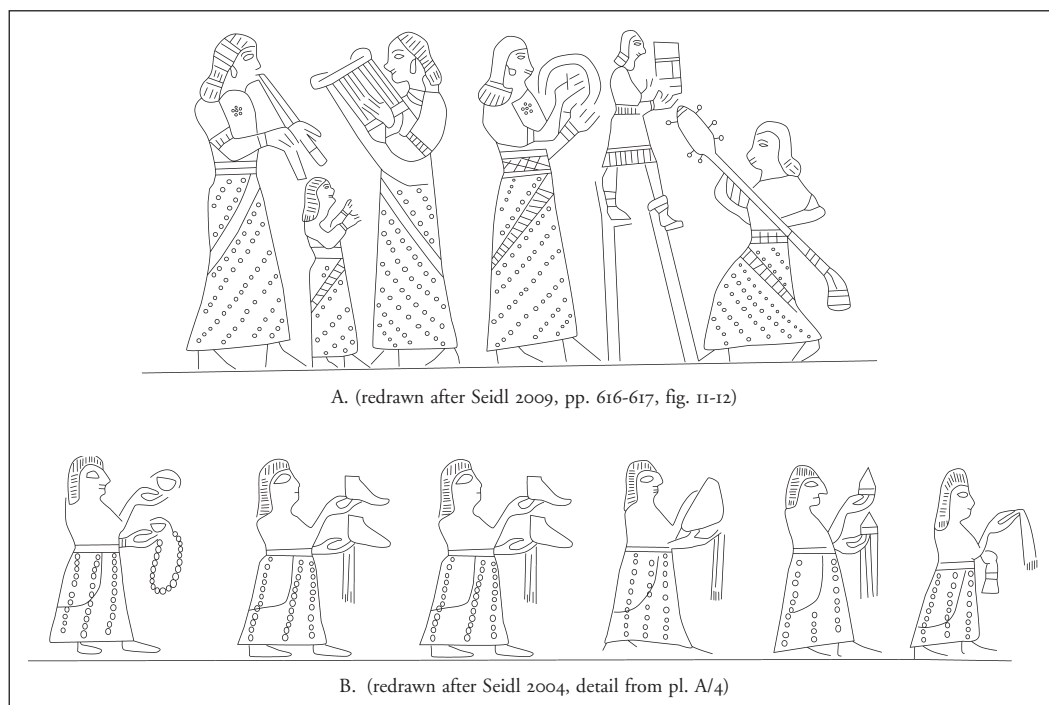


Fig. 3. Figures of female musicians and servant women on metal belts.

Beside the women with professions, we also see servants on the belts. They are usually depicted carrying a present (jewellery, fabric, shoes, food, helmet, bucket, et cetera) and serving a noblewoman (Fig. 3: B).<sup>89</sup> The heads of the weavers are covered, while the heads of the servants and musicians are uncovered. This situation can be explained as class discrimination among the women, reflected in dressing style. Although it is not known from written sources or visual arts, we think that probably women also conducted tasks such as pottery making, cookery and wattling.

The only data in the Uartian written sources about women engaged in production is the information about the 66 weaver women working in Rusahina (Toprakkale) palace. What was the status of these women? Here, weaver women in visual scenes can offer some ideas. Their clothing again attracts attention, including headgear that was also worn by women in religious and ceremonial scenes. Based on the idea that those women were noble or high-status women, we can conclude that weaver women were noble as well. We wonder, who were these women? We can answer this question by reference to a Neo-Assyrian tablet. In the tablet, a statistic is given that more than 10 weaver women worked in units in the harem in a Neo-Assyrian city.<sup>90</sup> Although there is no available evidence, weavers in Uartian palaces were also probably members of

<sup>89</sup> Seidl 2004, pl. A:1-4.

<sup>90</sup> SAA 7, no: 23, p. 19.

the harem. Additionally, it is understood from the Neo-Assyrian tablet that there was a hierarchy among the weaver women. Although it is hard to say based on data so far available, we propose that the Neo-Assyrian situation might also have been valid for Urartu. Hence, the division of labour among weavers in the Urartian visual data attracts attention. It can be said at least that in Urartu there were women weaving in production activity connected to the palace and non-elite women engaged in production for their own needs.

### Women in Urartian Religion

We don't have any written data about priestesses or female religious officials in the Urartian state as yet; however, scenes on a few pieces belonging to the Urartians offer us some ideas. We see women in religious scenes on some belt fragments,<sup>91</sup> a medallion,<sup>92</sup> a pectoral,<sup>93</sup> and a votive plaque.<sup>94</sup> Women were generally depicted in these scenes as engaged in libation (**Fig. 4: A**), serving or praying to the god/goddess-noblewomen(?) (**Fig. 4: B-C**) and probably taking away animals (goats or kids) to be sacrificed for ceremony (**Fig. 4: C**).

Two votive plaques depicting women during religious activities are significant. Seidl has suggested that the scene on the first votive plaque consisted of two female figures serving a goddess/priestess sitting on a throne in front of a temple depicted as in the fortress.<sup>95</sup> Considering the scene iconographically, a female figure is seen sitting on a throne with a back and lion-paw-shaped legs in front of a square-formed temple within the fortress. There is a bowl in one hand and a tripartite object in the other hand of this figure. She wears a decorated and belted garment, coming down to her ankles. She has headgear, the edges of which are decorated with the aura of flames or the blazing sun almost resembling sparks of fire, a sign of divinity.<sup>96</sup> Based on these details it can be said that the figure sitting on the throne is a goddess(?). There are two female figures in front of the woman sitting on the throne. The one in front has a decorated and belted garment reaching down to her ankles. Again, there is decorated headgear on the figure's head. Based on dress style peculiar to the nobles, it can be considered that this was a priestess or a noblewoman. The figure in the rear is distinguished from the other two figures by her uncovered head. Hence, this figure has the same features as female maidservants described on several Urartian belts. So we assume that this figure was a servant (**Fig. 5: A**).

On the second votive plaque, three female figures are described in the scene. The first one is standing and quite large. The figure has a garment coming down to her ankles that is adorned with nested square motifs, short-sleeved and with a belt on her waist. There is headgear coming down to her waist that is adorned, again, with nested square motifs and with fringed ends. As jewellery, there are earrings and bracelet. Just in front of this figure, there are two praying female

<sup>91</sup> Kellner 1991a, pl. 68–71; Seidl 2004, pl. A/4.

<sup>92</sup> Kellner 1991b, pp. 164–165, figs 1–2.

<sup>93</sup> Kellner 1991b, p. 166, figs 1–2.

<sup>94</sup> Kellner 1991c, pp. 286–299; Seidl 2004, pp. 174–191.

<sup>95</sup> Seidl 2004, p. 191, pl. 65.

<sup>96</sup> The best examples of figures decorated with sparks can be seen in the god figure depicted on shield of Upper Anzaf (Belli 1999, pp. 37–41).

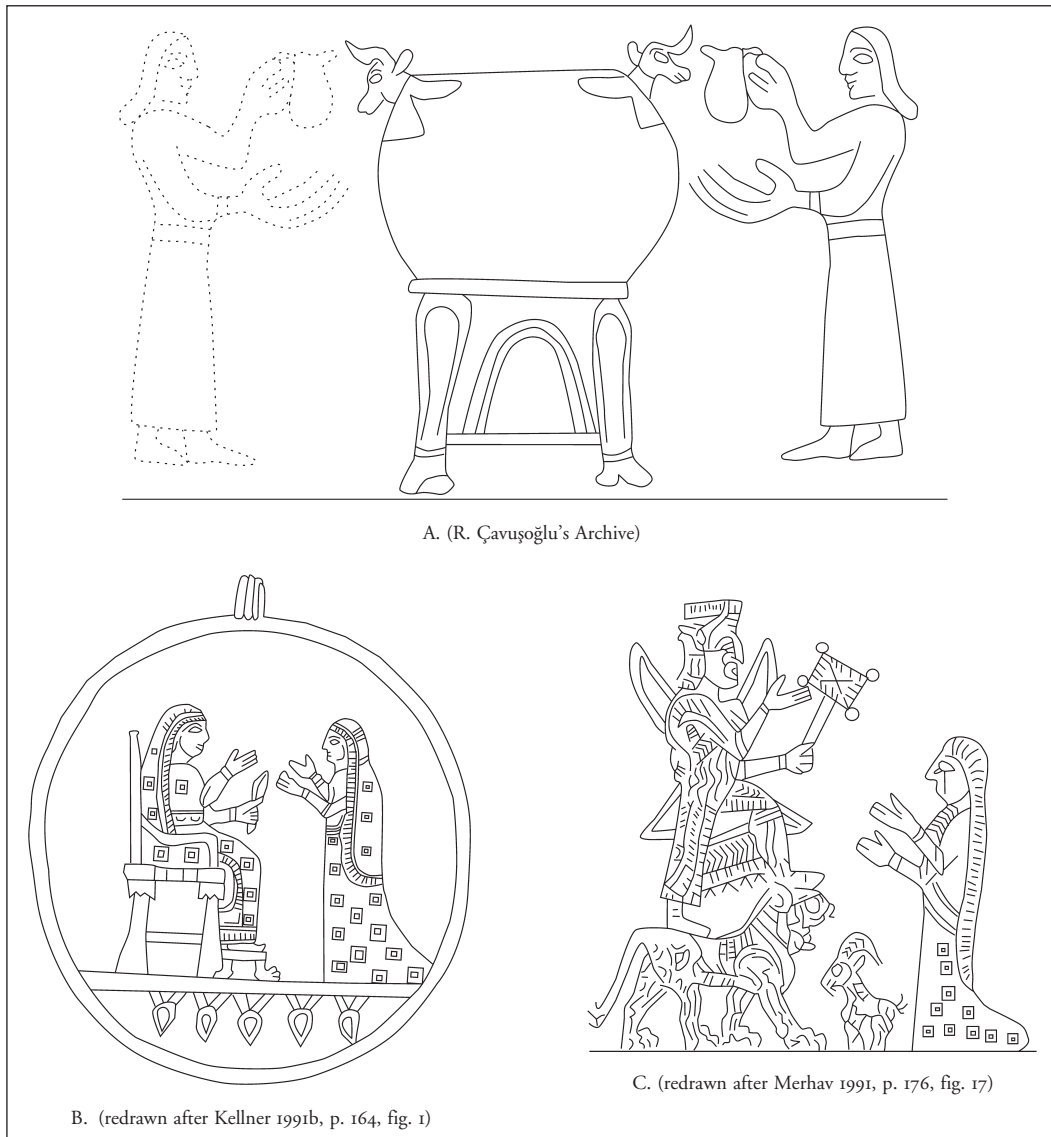
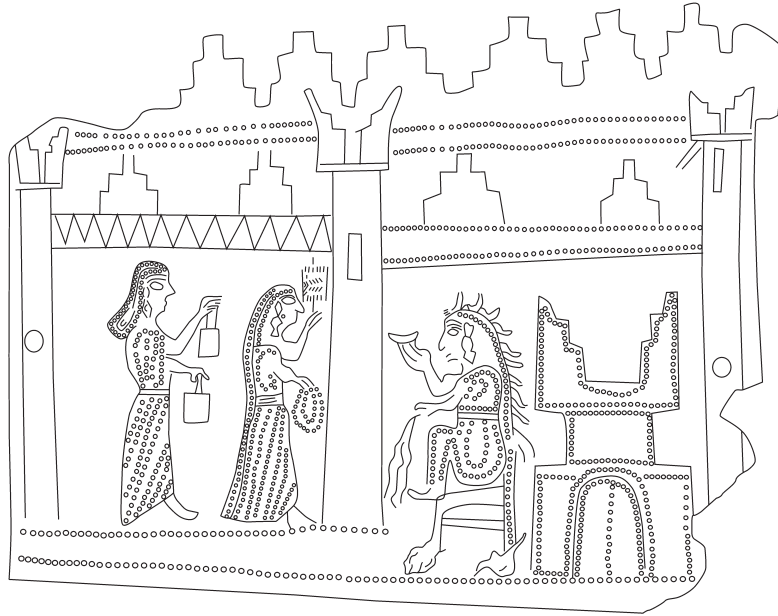


Fig. 4. Figures of women in religious scenes.

figures that are rather smaller than her. There is a kid next to these women. They have the same features as the first figure in terms of both clothing and accessories.<sup>97</sup> The depiction of the larger female figure standing in this scene suggests that she could be a goddess/noblewoman(?), while the figures facing her could be priestesses or women serving her (Fig. 5: B).

<sup>97</sup> Rehm 1997, p. 484, fig. 571, UI84.





A. (redrawn after Seidl 2004, p. 191, pl. 65)



B. (redrawn after Rehm 1997, p. 484, fig. 571)

Fig. 5. Figures of women in religious scenes on votive plaques.

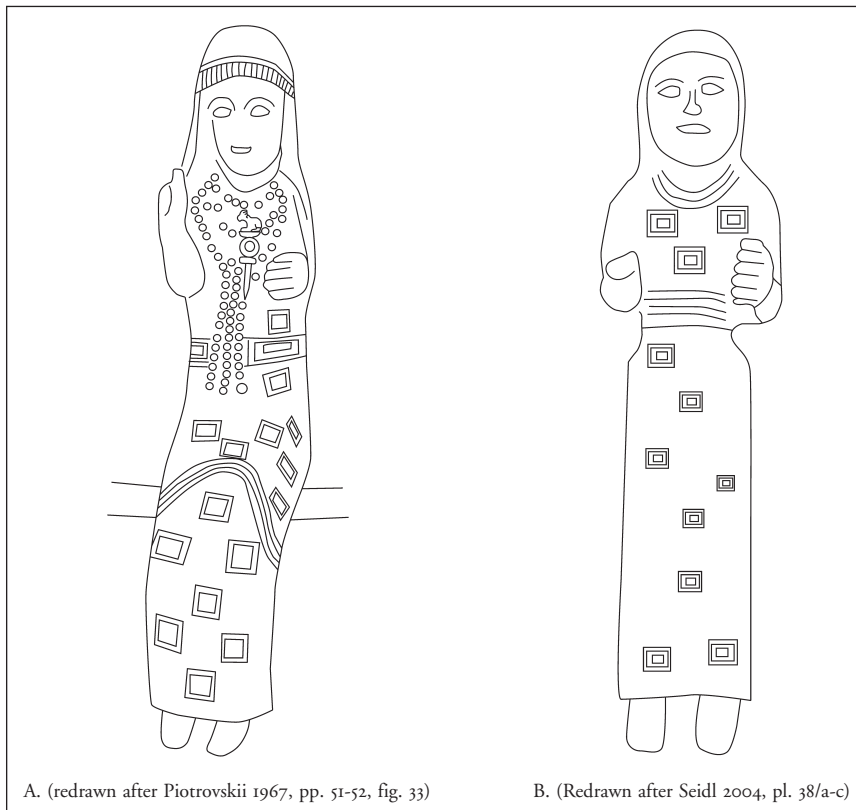


Fig. 6. Bronze female statuettes.

There are also a few bronze statuettes of women belonging to the Urartian period. While Seidl categorised one in standing position as a woman, he defined another engraved in sitting position as a goddess, with a question mark.<sup>98</sup> Given the fact that there is no known statuette depicting a king or an ordinary person in Urartian art, Çevik has suggested that both of these statuettes symbolise goddesses (Fig. 6: A-B).<sup>99</sup>

The position of the Urartian goddesses also provides important knowledge about women in Urartian society. Male gods constitute entirely the first lines of the Urartian pantheon list. There are 17 goddesses beginning from the 63rd row in the list consisting of 79 gods and goddesses on the Meher Kapı inscription. One of the most important goddesses, Arubani, wife of the supreme god Haldi, comes after Haldi, Teişeba and Şiuini on many other inscriptions.<sup>100</sup>

In excavations in Urartu, a place of worship or area dedicated expressly to goddesses has not been discovered up to now. It is known from written sources that the goddess Arubani was worshipped with the name Bagbartu in the city Muşāšir. In this city, there was an area of worship with steles

<sup>98</sup> Seidl 2004, pl. 38/a-c.

<sup>99</sup> Çevik 2012, p. 70.

<sup>100</sup> Piotrovskii 1965, pp. 38-40.

belonging only to Haldi and his wife Bagbartu.<sup>101</sup> Besides this, we understand from Urartian inscriptions that animals were sacrificed for Arubani in different places.<sup>102</sup> The sacrifice of female animals, such as cows, for goddesses, particularly for Arubani, probably shows that there used to be gender discrimination for ritual sacrifices.

In some images, royal women or priestesses appear in religious ceremonies directed by women (such as taking away animals for sacrificing, worshipping, et cetera). Women serving another woman sitting on a throne also appear in some scenes. This situation indicates a hierarchical classification among female religious officials, as in Neo-Assyria.<sup>103</sup>

## Conclusion

The fact that women are little mentioned in the Urartian written sources results from the male-dominated structural character of Urartu and an emphasis on official activities such as war and reconstruction in the inscriptions. Apart from a few exceptions, women are usually mentioned as booty in the parts of the inscriptions relating to military campaigns. This situation makes complex assessments of Urartian woman difficult. As well as the sumerogram MUNUS for defining woman, the words “úedia” and “lutú”, which are only used for women who are war booty and of which numbers are expressed in the thousands, should be defined as “looted women”. Based on this, words such as “mother”, and “daughter” in the Urartian language are not known as yet. However the word “sila” which appears in the inscriptions means “wife”, the sumerogram MUNUS.LUGAL means “queen”, and MUNUS. TUR means “girl”. Although it is feminine, the exact meaning of the sumerogram MUNUS.SIG<sub>7</sub> is not known.

The evidence in the inscriptions leads us to the view that the Urartian kings had a harem as well as their own queens. Although it is not known who the queens were, it can be accepted based on a Neo-Assyrian tablet (a Urartian woman on the throne of Habhu) that there were dynastic marriages between Urartu and contemporary societies. From available written sources, we so far know of two individual Urartian royal women, “Tariria” and “Qaquli”. The prerogatives of royal women are signified by examples mentioned in the written sources, such as there being a special vineyard in the name of Tariria, the wife of the Urartian king Minua, and that there is a male slave owned by a woman (MUNUS.SIG<sub>7</sub>). Thus it is indicated that woman did not have an insignificant profile in the Urartian palace. Written and visual data shows that royal women, or women of the palace, took part in occupations such as weaving and entertainment. Royal production appears to have been more hierarchical and organised than production undertaken by public women. We can accept that public women took part in processes such as animal husbandry, agriculture, pottery and basket making.

Based on archaeological and visual data, the differences between royal women and non-elite women is apparent in clothing and jewellery. This class distinction is also reflected in female burials and burial gifts. The grave goods found in tombs which are supposed to have belonged to Urartian noblewomen, mainly jewellery, are more intricate and crafted than those found with

<sup>101</sup> Salvini 2006, p. 200.

<sup>102</sup> For these inscriptions, see CTU I A 5–33, A II–1 Vo., A 12–1, A 12–2, A 12–3.

<sup>103</sup> Teppo 2005, pp. 84–95.

women defined as public women. The tombs of Urartian public women are of the simple inhumation type, and the burial gifts are quite plain. The discrimination between man and woman is as apparent as the discrimination between royal and public women. The row of goddesses following behind in the Urartian pantheon of Meher Kapı and the sacrifice of female animals for the goddesses reflects the gender-oriented aspect of Urartian society.

Despite the evidence available, knowledge about Urartian women remains limited. Hence, we think that further archaeological excavations and discoveries will clarify discussions on Urartian women, as in many other fields.

### Abbreviations

|         |  |
|---------|--|
| ABZ     | <i>Assyrisch-Babylonische Zeichenliste</i>                           |
| CTU I   | <i>Corpus Dei Testi Urartei I</i>                                    |
| CTU IV  | <i>Corpus Dei Testi Urartei IV</i>                                   |
| Hchl    | <i>Handbuch der Chaldischen Inschriften I–II</i>                     |
| KUKN    | <i>Korpus Urartskich Klinoobraznykh Nadpisej</i>                     |
| RINAP 3 | <i>The Royal Inscriptions of the Neo-Assyrian Period 3</i>           |
| Ro      | <i>Recto</i>   |
| SAA 4   | <i>Queries to the Sungod</i>   |
| SAA7    | <i>Imperial Administrative Records</i>                               |
| SAA 9   | <i>Assyrian Prophecies</i>   |
| SAA 13  | <i>Letters from Priests to the Kings Esarhaddon and Assurbanipal</i> |
| UKN II  | <i>Urartskie Klinoobraznye Nadpisi II</i>                            |
| UPD     | <i>Urartskie Pis'ma i Dokumenty</i>                                  |
| Vo      | <i>Verso</i>   |

### Bibliography

- Amiet, P.  
1966 *Elam*. Auvers-sur-Oise, France: Archée.
- André-Salvini, B. and Salvini, M.  
1999 “A New trilingual vocabulary from Ras Shamra and the relationship between Hurrian and Urartian,” in *Nuzi at Seventy-Five* (Studies on the Civilisation and Culture of Nuzi and the Hurrians 10), edited by D. Owen and G. Wilhelm, pp. 267–275. Bethesda: CDL Press.
- Anlağan, T.  
1998 “Sadberk Hanım Müzesi’ndeki bir Urartu kemeri,” *Palmet* 2: 51–74.
- Ayaz, G.  
2006 *Van/Altıntepe Urartu Nekropolü Takıları*. Unpublished Masters diss. Yüzüncü Yıl University, Van.
- Balkan, K.  
1964 “Patnos’ta keşfedilen Urartu tapınağı ve Urartu sarayı,” in *Atatürk Konferansları: Türk Tarih Kurumu Yıllık Konferansları*, pp. 235–243. Ankara: Türk Tarih Kurumu Basımevi.
- Barnett, R. D.  
1963 “The Urartian cemetery at Igdyr,” *Anatolian Studies* 13: 154–198.

Belli, O.

1999 *The Anzaf Fortresses and the Gods of Urartu*. Istanbul: Arkeoloji ve Sanat Yayınları.

Borger, R.

ABZ 1978 = *Assyrisch-Babylonische Zeichenliste* (Alter Orient und Altes Testament Bd. 33). Neukirchen-Vluyn: Neukirchener Verlag.

Burney, C. A.

1966 "A first season of excavations at the Urartian citadel of Kayalidere," *Anatolian Studies* 16: 55–III.

Cole, S. W. and Machinist, P.

1998 *Letters from Priests to the Kings Esarhaddon and Assurbanipal* (State Archives of Assyria 13). Helsinki: Neo-Assyrian Text Corpus Project.

Collins, P.

2008 *Assyrian Palace Sculptures*. London: British Museum Press.

Çavuşoğlu, R. and Biber, H.

2008 "Van-Kalecik Urartu Nekropolü üzerine bir değerlendirme," in *Aykut Çınaroğlu'na Armağan* [Studies in Honour of Aykut Çınaroğlu], edited by E. Genç and D. Çelik, pp. 189–212. Ankara: Ekici Form Ofset.

Çavuşoğlu, R., Gökce, B. and Işık, K.

2010 "Urartu krallığı'nda harem," *Colloquium Anatolicum/Anadolu Sohbetleri* 9: 153–168.

Çevik, N.

2000 *Urartu Kaya Mezarları ve Ölü Gömme Gelenekleri*. Ankara: Türk Tarih Kurumu Basımevi.

Çevik, Ö.

2012 "Urartu'da kadınlar," in *İsmail Fazlıoğlu Anı Kitabı* (Trakya Üniversitesi Sosyal Bilimler Enstitüsü 2012/3 Yayınları), edited by I. Şahin, pp. 67–75. Ankara: Bizim Büro Basımevi.

Çilingiroğlu, A. and Erdem, Ü. A.

2009 "Ayanis kalesi kazıları 2006–2008," *Kazı Sonuçları Toplantısı* 31, no. 1: 1–26.

Çilingiroğlu, A. and Salvini, M.

2012 "New contributions to Urartian archaeology from the fortress at Ayanis," in *Anatolian Iron Ages 7 The Proceedings of the Seventh Anatolian Iron Ages Colloquium Held at Edirne, 19–24 April 2010*, edited by A. Çilingiroğlu and A. Sagona, pp. 99–113, Leuven: Peeters.

Çiner, R.

1965 "Altuntepe (Urartu) iskeletlerine ait kalıntıların tetkiki," *Belleten* 29, no. 114: 225–240.

Darga, A. M.

1992 *Hitit Sanatı*. Istanbul: Akbank.

Diakonoff, I. M.

1971 *Hurrisch und Urartäisch*. Munich: Kitzinger.

UPD 1963 = *Urartskie Pis'ma i Dokumenty*. Moscow-Leningrad: İzdatel'stvo Akademii Nauk CCCP.

Erkman, C., Kırmızıoğlu, P. G., and Yiğit, A.

2009 "Altuntepe Urartu iskeletlerine ait dişlerin odontometrik analizi," *Zeitschrift für die Welt der Türken / Journal of World of Turks* 1, no. 2: 177–198.

Fales, F. M. and Postgate, J. N.

SAA 7 1992 = *Imperial Administrative Records, Part I: Palace and Temple Administration* (State Archives of Assyria vol. 7). Helsinki: Helsinki University Press.

Friedrich, J.

1969 "Hurritisch," in *Alt Kleinasiatische Sprachen* (Handbuch der Orientalistik, 1). Leiden: Brill.

Harutjunjan, N. V.

KUKN 2001= *Korpus Urartskich Klinoobraznykh Nadpisej*. Yerevan: Nacional'naja Akademija Nauk Respubliki Armenii Institut Vostokovedeniya.

Grayson, K. and Novotny, J.

RINAP 3 2012= *The Royal Inscriptions of Sennacherib, King of Assyria (704–681 BC)*, Part 1 (The Royal Inscriptions of the Neo-Assyrian Period v. 3/1). Winona Lake, Ind.: Eisenbrauns.

Grekyan, Y.

2008 "Kinn Urartuom. Urartui taguhineri," in *Shnorh i Verust: Aarasp, Tses, Patmutiun* [A Gift from Above: A Myth, Ritual, History], pp. 292–309. Yerevan: Gitutiun.

Hoffman, J. K.

1978 *Sociopolitical Implications of the Architecture of Northern Urartu and Urartian Sources*. Boston: Massachusetts Institute of Technology.

Kellner, H. J.

1991a *Gürtelbleche aus Urartu* (Prähistorische Bronzefunde, Abteilung 12, Bd. 3). Stuttgart: Steiner.

1991b "Personal Adornments," in *Urartu: A Metalworking Center in the First Millennium B.C.E.*, edited by R. Merhav, pp. 164–170. Tel Aviv: The Israel Museum Press.

1991c "Votive Plaques," in *Urartu: A Metalworking Center in the First Millennium B.C.E.*, edited by R. Merhav, pp. 286–299. Tel Aviv: The Israel Museum Press.

König, F. W.

Hchl 1955–57 = *Handbuch der Chaldischen Inschriften*, 2 vols. Graz.

Konyar, E.

2011 "Demir çağında anadolu kadını: Urartu, Frig ve Lidya," in *Anadolu'da Kadın On Bin Yıldır Eş, Anne, Tüccar, Kraliçe*, edited by A. M. Darga, pp. 241–267. Istanbul.

Lanfranchi, G. B. and Parpola, S.

1990 *Letters From The Northern and Northeastern Provinces* (State Archives of Assyria, vol. 5; The Correspondence of Sargon II, pt. 2). Helsinki: Helsinki University Press.

Melikishvili, G. A.

UKN II 1971 = *Urartskie Kliobraznye Nadpisi II*. Moscow: Otkritiya i Publicatsiya, Vestnik Drevnej Istorii.

Merhav, R.

1991 "Some observations on pectorals and medallions," in *Urartu: A Metalworking Center in the First Millennium B.C.E.*, edited by R. Merhav, pp. 171–176. Tel Aviv: The Israel Museum Press.

Oded, B.

1979 *Mass Deportations and Deportees in the Neo-Assyrian Empire*. Wiesbaden: L. Reichert.



Ögün, B.

1978a “Die Urartäischen Gräber in der Gegend von Adilcevaz und Patnos,” *Proceedings of the Xth International Congress of Classical Archaeology*, edited by E. Akurgal, pp. 61–67. Ankara: Türk Tarih Kurumu.

1978b “Die Urartäischen Bestattungsbräuche,” in *Studien zur Religion und Kultur Kleinasien: Festschrift für Friedrich Karl Dörner zum 65. Geburtstag am 28. Februar 1976 II*, edited by F. K. Dörner, S. Şahin, E. Schwertheim and J. Wagner, pp. 639–678. Leiden: E. J. Brill.

Özgüç, T.

1969 *Altıntepe II: Mezarlar, Depo Binası ve Fildişi Eserler/Tombs, Storehouse and Ivories*. Ankara: Türk Tarih Kurumu Basımevi.

Parpola, S.

1987 *Letters From Assyria And The West* (State Archives of Assyria, vol. 1; The Correspondence of Sargon II Pt. 1). Helsinki: Helsinki University Press.

SAA 9 1997 = *Assyrian Prophecies* (State Archives of Assyria vol. 9). Helsinki: Helsinki University Press.

Piotrovskii, B. B.

1965 “Urartu dini,” *Ankara Üniversitesi Dil ve Tarih Coğrafya Fakültesi Dergisi* 23, nos. 1–4: 37–48.

1967 *Urartu: The Kingdom of Van and its Art*. London: Evelyn Adams and Mackay Ltd.

Radner, K. and Schachner, A.

2001 “From Tuşhan to Amedi. Topographical questions concerning the Upper Tigris region in the Assyrian period,” in *Salvage Project of the Archaeological Heritage of the Ilisu and Carchemish Dam Reservoirs — Activities in 1999*, edited by N. Tuna, J. Öztürk and J. Velibeyoğlu, pp. 729–776. Ankara: Middle East Technical University Press.

Rehm, E.

1997 *Kykladon und Alter Orient: Bestandskatalog des Badischen Landesmuseums Karlsruhe*. Karlsruhe: Badisches Landesmuseum.

Salvini, M.

2006 *Urartu Tarihi ve Kültürü*. Istanbul: Arkeoloji ve Sanat Yayınları.

CTU I 2008 = *Corpus Dei Testi Urartei*. Vols. 1, 2, and 3. Rome: Istituto di Studi Civiltà dell’Egeo e Del Vicino Oriente.

CTU IV 2012 = *Corpus Dei Testi Urartei*. Vol. 4. Rome: Istituto di Studi Civiltà Dell’Egeo e Del Vicino Oriente.

Seidl, U.

2004 *Bronzekunst Urartus*. Mainz am Rhein: Philipp von Zabern.

2009 “Musik und tanz in Urartu,” in *Altan Çilingiroğlu’na Armağan Yukarı Denizin Kıyısında Urartu Krallığı’na Adanmış Bir Hayat* [Studies in Honour of Altan Çilingiroğlu A Life Dedicated to Urartu on the Shores of the Upper Sea], edited by H. Sağlamtimur, E. Abay, Z. Derin, Ü. A. Erdem, A. Batmaz, F. Dedeoğlu, M. Erdalkıran, B. M. Baştürk and E. Konakçı, pp. 607–619. Istanbul: Arkeoloji ve Sanat Yayınları.

Starr, I.

SAA 4 1990 = *Queries to the Sungod: Divination and Politics in Sargonid Assyria* (State Archives of Assyria vol. 4). Helsinki: Helsinki University Press.

Teppo, S.

2005 *Women and Their Agency in the Neo-Assyrian Empire*. Helsinki: University of Helsinki.

Yılmaz, H., Çavuşoğlu, R., Baykara, İ. and Gökce, B.

2008 “Van Kalecik (Urartu) toplumunun paleoantropolojik analizi,” *Arkeometri Sonuçları Toplantısı* 24: 29–47.

Wilhelm, G.

1976 “Zur urartäischen Nominalflexion,” *Zeitschrift für Assyriologie* 66: 105–119.

Wiseman, D. J.

1983 “Mesopotamian Gardens,” *Anatolian Studies* 33: 137–144.

Rafet ÇAVUŞOĞLU

Yüzüncü Yıl University, Van, Turkey

E-mail: cavus.rafet@gmail.com

Kenan IŞIK

Van Archaeological Museum, Van, Turkey

E-mail: kenan\_123@hotmail.com

Bilcan GÖKCE

Yüzüncü Yıl University, Van, Turkey

E-mail: bilcan.g@gmail.com

# ‘Child Sacrifice’ without Children or Sacrifice: The Pozo Moro Relief

Joseph AZIZE

## Abstract

*In this study I consider a fifth-century BCE relief from Pozo Moro, Spain, which is often thought to depict Phoenician ‘child sacrifice’ (Fig. 1). First, I briefly discuss the excavations at Pozo Moro. Second, I contend that nothing depicted in the relief can reasonably be interpreted as a sacrifice and, furthermore, that there are no children in it. Third, I suggest that in fact it represents a parody of the Phoenician “presentation” scene exemplified on the Ahirom (also spelled Ahirom) sarcophagus from Byblos and sundry other artefacts. Finally, I note that it might be a forerunner of the artistic style known as the “grotesque”, a style which was previously thought to have originated in Hellenistic studios. Thus, one more piece in the chain of evidence for a regular practice of child sacrifice among the Phoenicians and Carthaginians disappears.\**

## Introduction

In a fairly recent article, I argued that, properly understood, the evidence establishes that the ancient Phoenicians and Carthaginians did not regularly sacrifice children, but rather offered animal sacrifices for the conception and for the wellbeing of their children, as depicted in the *Krt* poem from Ugarit, a related civilisation.<sup>1</sup> The phenomenon of regular child sacrifice is not to be confused with the exceptional practice of sacrificing a noble youth during times of crisis, as found in 2 Kings 3:27.<sup>2</sup> This study will not repeat those conclusions, but will consider an interesting banquet scene upon a relief from Pozo Moro which is often used as further evidence for the alleged practice of child sacrifice, although some scholars gainsay this view.

Briefly, after describing the Pozo Moro relief, my argument proceeds in two parts: a negative and a positive. In the negative, I say what the relief is not. I argue that it cannot depict child sacrifice, as it does not depict any sacrifice and it is by no means clear that it depicts any children. The interpretation that it does depict such a practice is based on the a priori position that the Phoenicians and Carthaginians regularly practised such sacrifice. Kennedy asserts that the scene depicts sacrifice,<sup>3</sup> but most of the details he uses to support this view are not attested by Phoenician rituals. The most telling divergence is that when the Greek and Roman writers who alleged

\* The author wishes to acknowledge Marcelino Youssef for his edifying and erudite support of all things Phoenician.

<sup>1</sup> Azize 2007.

<sup>2</sup> There have been many commentaries on this passage, but in the context of human sacrifice, see Tatlock 2006, pp. 200–206.

<sup>3</sup> Kennedy 1981.

that the Carthaginians sacrificed children specified the deity to whom the sacrifices were offered, it was Kronos. Modern scholars have identified Kronos with Ba'al Hammon. The Pozo Moro relief clearly does not depict Ba'al Hammon, a god whose iconography is well attested. To sustain the "child sacrifice" interpretation of the relief, scholars have had to argue that it presents evidence of a hitherto unknown practice of sacrificing children to deified Death.

In the positive limb of my thesis, I suggest that the relief is better interpreted as a parody of the presentation scene best known from the sarcophagus of Ahirom of Byblos, but also attested at other sites in the Middle East. The fact that it is a parody significantly extends our knowledge of Phoenician art. I also contend that certain of the relief's features anticipate the style known as the "grotesque". If so, this would place the origins of that style not in Hellenistic times but earlier and would be another example of the influence of Phoenician culture upon Greece.

## 1 The Excavations at Pozo Moro

Almagro-Gorbea and several other scholars produced the first publication and study of the Pozo Moro reliefs, found in 1971, in the Spanish language.<sup>4</sup> This was followed in 1983 by what must be regarded as the major publication, a book-length Spanish piece by Almagro-Gorbea in the *Madriider Mitteilungen*. This is the publication which I treat as the *editio princeps*.<sup>5</sup>

In 1971, archaeologists located a tower monument in the village of Chinchilla, Albacete province, 125 km inland from Valencia, at a height of about 1000 m.<sup>6</sup> The site is quite isolated.<sup>7</sup> Five levels were found. Level IV, where the tower is located, is preceded by Level V, upon the natural soil of which the monument was built. The later Level III is a "rich Iberian tumulus of cremations" spanning the middle of the fifth century BCE until the first century CE.<sup>8</sup> Almagro-Gorbea saw the monument and its reliefs as providing further evidence for the role of the Phoenicians in stimulating the development of higher civilisation in the Iberian peninsula, and the development "de barbarie a civilización."<sup>9</sup>

The tower is built on a square plan measuring 3.65 m each side. The tower comprised some 10 or 12 courses, with a total height of 5 m.<sup>10</sup> Inside was a clay base, coloured red from firing. Kennedy concludes that this was the *bustum*, where ashes and bone remains provided direct evidence of cremation.<sup>11</sup> There was evidence of objects of gold, silver, bronze, iron and bone, including remnants of an Attic kylix and a lekythos. The furnishings, in conjunction with the known development of the interior of the peninsula, allowed Almagro-Gorbea to date the

<sup>4</sup> Almagro-Gorbea 1983, n.2, pp. 178-179.

<sup>5</sup> Almagro-Gorbea 1983.

<sup>6</sup> Almagro-Gorbea 1983, pp. 177-179; Kennedy 1981, p. 209.

<sup>7</sup> López Pardo 2006, p. 25.

<sup>8</sup> Kennedy 1981, p. 209.

<sup>9</sup> Almagro-Gorbea 1983, p. 177. The site at Pozo Moro is evidently not considered an important settlement, as it is not even mentioned in Bierling (2002), a monograph on the Phoenicians of Spain, nor shown on the map on p. xii. Aubet Semmler (1999) does not mention Pozo Moro in her article on Phoenician and Punic Spain, but does show it on the first map on p. 280.

<sup>10</sup> Almagro-Gorbea 1983, pp. 191-193; Kennedy 1981, p. 210.

<sup>11</sup> Kennedy 1981, p. 210.

monument to about 500 BCE, as did López Pardo.<sup>12</sup> Kennedy, relying upon the Greek pottery, offered a more precise date of 490 ( $\pm 10$ ) BCE.<sup>13</sup>

The tower rests upon the three stepped levels, and upon the top level, built into the exterior of the tower, are four figures of lions. These figures stand at each corner of the tower, serving as corner blocks, and there are fragments of two smaller lions on the north and east sides.<sup>14</sup> As Almagro-Gorbea observes, the lions are shown in a terrifying aspect, and were doubtless meant to be apotropaic defenders of the tower and the person or persons interred there.<sup>15</sup> These lions are also reminiscent of the sarcophagus of Ahiiram from Byblos.<sup>16</sup> Almagro-Gorbea was undoubtedly correct to see in the art of this tower evidence of Syrio-Phoenician influence on Pozo Moro in an orientalisising epoch.<sup>17</sup> López Pardo complements rather than contradicts this view by pointing to indirect Neo-Hittite artistic influence.<sup>18</sup>

The Pozo Moro reliefs and sculptures have not fared well over time. Of the few remnants sufficiently well preserved to be interpreted, we must note especially what is called "the smiting god".<sup>19</sup> It is perhaps a Reshef figure,<sup>20</sup> either a three-headed creature which Almagro-Gorbea calls a "hydra", or three feline heads superimposed one over the other. In any case, the heads are either emitting from their mouths something such as fire, or perhaps roaring, as Almagro-Gorbea suggests.<sup>21</sup> If the latter, then the roaring is depicted as if it were material, something like the way a cartoonist might illustrate a yell. There is also a frieze depicting a portion of a female head, with a double lotus flower next to it, which, Almagro-Gorbea contends, belongs to a divinity, perhaps Anat.<sup>22</sup> Perhaps the most striking of all the reliefs, however, barring only the banquet scene, is one depicting a male and female in obvious if not exultant coitus. Almagro-Gorbea suggests that it may correspond to the *hieros gamos*, but the evidence for this attribution is non-existent,<sup>23</sup> and there is no evidence that the Phoenicians practised sacred marriage. The most recent monograph on the subject does not mention Phoenicia, and the Ugaritic material, presented in an appendix, is not sufficient to allow the author to speculate that the institution was known there.<sup>24</sup> Overall, the tower art exhibits considerable diversity.

The "banquet scene" from the southeast corner of the tower, which we shall consider here,<sup>25</sup> is reproduced in Fig. 1. As can be seen, a two-headed monster is enthroned on the left side. In one hand, it holds a bowl out of which something is peering and in the other, a portion of a pig.

<sup>12</sup> Almagro-Gorbea 1983, p. 188; López Pardo 2006, p. 29.

<sup>13</sup> Kennedy 1981, p. 210.

<sup>14</sup> Almagro-Gorbea 1983, pp. 192–193, with a sketch on p. 192; Kennedy 1981, p. 210.

<sup>15</sup> Almagro-Gorbea 1983, p. 193.

<sup>16</sup> Noted by Almagro-Gorbea (1983, p. 194).

<sup>17</sup> Almagro-Gorbea 1983, p. 195; Kennedy (1981, p. 210) states that "the organizing principle of the monument came from the Near East." For the "orientalisising" epoch in general, there have been many treatments, but see Burkert (1992).

<sup>18</sup> López Pardo 2006, pp. 35–39. He is aware of the problems with dating, but, with Almagro-Gorbea, believes that this points to a conservative workshop, probably in Gadir, see pp. 40–43.

<sup>19</sup> Cornelius 1994, p. 255.

<sup>20</sup> Almagro-Gorbea 1983, pp. 197–198, table 23 b.

<sup>21</sup> Almagro-Gorbea 1983, p. 204, table 23 a.

<sup>22</sup> Almagro-Gorbea 1983, p. 200, table 24 a.

<sup>23</sup> Almagro-Gorbea 1983, pp. 203–204, table 26.

<sup>24</sup> Lapinkivi 2004, pp. 263–269.

<sup>25</sup> Kennedy 1981, p. 211.



Fig. 1. Stone relief from Pozo Moro, Spain, fifth-century BCE.

On a table before it, we see the remainder of the pig. To the right stands someone offering, it would appear, a bowl in the direction of the monster. There is another figure at the far right, where the relief breaks off. Unfortunately, there is no writing to assist with identifying these figures.

In 1981, Kennedy produced an English language study wherein he concluded that the banquet scene depicts

the Underworld where insatiable Death must be fed by a procession of offerings, principally the boar or pig, the animal pre-eminently associated with the netherworld. Further victims were prepared by Seth (or his colonial counterpart) or by a priest wearing an animal head mask of the god. The scene may be the model for a ritual re-enactment of the anniversary meals for the dead and may be the explanation for the passage in Isa. 65:4 “They spent the night in tombs, eating swine’s flesh and drinking the broth of abominable things.” The components from the banquet at Pozo Moro would seem to be present: a subterranean place at night, the flesh of a pig or boar to eat, and for drink the “broth of abominable things,” which we would interpret as either the blood of the slain infant or the actual broth remaining after the flesh (i.e., splanchna) of the child had been boiled.<sup>26</sup>

<sup>26</sup> Kennedy 1981, pp. 214–215.



In support of this thesis, Kennedy links the bi-cephalic monster to creatures such as Leviathan, Cerberus, Dawn and Sunset at Ugarit, to Proverbs 27:20 ("Sheol and Abaddon are never satisfied") and to Egyptian bi-cephalic representations of Seth-Horus, where: "the animal head of Seth fac(es) toward the back and the falcon head of Horus... forward."<sup>27</sup> Kennedy conjectured that here the two heads might demonstrate "the monster's insatiable appetite," a characteristic of Mot (Death) at Ugarit.<sup>28</sup> Kennedy concludes that the two-headed monster of Pozo Moro is to be identified as Death.<sup>29</sup> The second large figure, only imperfectly surviving, with an animal-form head, he likened to an Egyptian bronze statuette of Seth from the Nineteenth-Twentieth Dynasties (1320–1090 BCE).<sup>30</sup> Any deviations from the models of Seth he says are explained by the chain of influence, which "probably runs through Phoenicia and the Punic colonies, a route that would allow for certain mutations and even degenerations."<sup>31</sup> The "similarity" — Kennedy does not say "identification" — is buttressed by the fact that a black pig was annually sacrificed to Seth.<sup>32</sup>

When interpreting the "little people peering over the rims of bowls," Kennedy notes that "there is an artistic convention that human beings are frequently shown on a smaller scale than divinities in the same scene," without advising which tradition, Iberian, Greek, Phoenician or Egyptian, he is referring to.<sup>33</sup> However, he asserts that "the most obvious explanation for the little people in this relief is that they are children who are being offered as sacrifices to the monster."<sup>34</sup> Similarly, Rundin, stating that the small figures are "most likely children," concludes that "it is reasonable to believe that the relief, *however imaginatively*, represents North-west Semitic child sacrifice" (my italics).<sup>35</sup>

In support of this entire thesis, Kennedy refers to archaeological evidence from Neolithic Jericho and Roman-era North Africa, and the texts of Judges 11:34–40, 2 Kings 3:26–27, 16:3, and Jeremiah 7:31.<sup>36</sup> He also refers to the well-known Carthaginian depiction of a priest carrying an infant, allegedly "destined for sacrifice,"<sup>37</sup> and states that the "reliefs" (plural in Kennedy's text) of Pozo Moro "may" represent "the next stages of the ritual";<sup>38</sup> that is:

The child was put to the sword by a priest, who perhaps wore a mask in the shape of an animal's head. The child becomes an offering to Death as shown by the second child in the bowl held aloft by the two-headed monster. It cannot be determined from the relief whether those making the offering participated in any way in sharing the blood or flesh of the child, although the supposition would be that they did. The fulfillment of any sacrifice was the sacrificial meal. The gods are called upon and receive their share, but the ones who bring the offerings also participate in the eating.<sup>39</sup>

<sup>27</sup> Kennedy 1981, pp. 212–213.

<sup>28</sup> Kennedy 1981, p. 212.

<sup>29</sup> Kennedy 1981, p. 213.

<sup>30</sup> Kennedy 1981, p. 213.

<sup>31</sup> Kennedy 1981, p. 214.

<sup>32</sup> Kennedy 1981, p. 214.

<sup>33</sup> Kennedy 1981, p. 214.

<sup>34</sup> Kennedy 1981, p. 214.

<sup>35</sup> Rundin 2004, p. 426.

<sup>36</sup> Kennedy 1981, p. 214.

<sup>37</sup> Kennedy 1981, p. 214.

<sup>38</sup> Kennedy 1981, p. 214.

<sup>39</sup> Kennedy 1981, p. 214.

Kennedy has been followed by several scholars who have not added anything to his thesis. Heider is of the view that, excepting only Kennedy's speculations about cannibalism, "an examination of the photographs of the relief under discussion supports his interpretation completely."<sup>40</sup>

However, Brown, whose study of "child sacrifice" in late Carthage is not particularly rigorous in its questioning of the received wisdom, casts doubt on Kennedy's opinion that the relief illustrates "what appears to be cannibalistic child-eating."<sup>41</sup> First, she observes the artwork is not true to life: "If the child is envisioned as lying on its back, its neck is unnaturally twisted; if it is lying on its belly, its feet are in an even more unlikely position."<sup>42</sup> To her credit, Brown also voices reservations about Heider's conclusions, pointing out that "it is not completely clear that the beings apparently about to be killed and consumed on the relief are human children, and since the cemetery which grew up around the tower is not a tophet. ..."<sup>43</sup>

In the next year, 1992, Morris accepted that child sacrifice was represented on the Pozo Moro monument.<sup>44</sup> Later in her book, she stated:

The Pozo Moro cemetery in inland Spain features a pillar monument with relief sculptures that look as if transplanted from North Syria in the ninth or eighth centuries. Its ritual and mythological scenes reflect Near Eastern literature and cult practices such as the sacrifice of a pig and an infant to a double-headed monster, in the presence of figures wearing animal masks.<sup>45</sup>

While Morris noted the continuity between the artwork of the tower as a whole (not merely the relief we are considering) and the art of the ancient Near East, in 1993, Levenson attempted to link it to an incident in the Hebrew Bible. He accepted that the relief shows child sacrifice, adding only that the deity shown there appears as "destroyer", and drew a connection between this manifestation and the account in Exodus 12 where "... the Destroyer is YHWH in his aspect of slayer of the first-born son."<sup>46</sup> Levenson does, however, dismiss the possibility of an "analogy" between "the child-eating monster depicted on the Pozo Moro Tower" and Yahweh's attempt to murder Moses in Exodus 4:24–26.<sup>47</sup>

Rundin relies upon the material collected by Day, Brown, Levenson and others, and their conclusions, yet acknowledges in a footnote that Schwartz's latest work has negated the archaeo-osteological evidence that the infants cremated in what are called the "tophets" were "slaughtered in sacrificial ritual."<sup>48</sup> Rundin also concedes the circularity of one of his arguments, that which sees in the Pozo Moro relief the same tradition as lies behind the legend of the Minotaur. However, he excuses the chain of reasoning on the basis that like jigsaw pieces, identifying one of the creatures in the relief as a bull presents a "coherent image."<sup>49</sup>

<sup>40</sup> Heider 1985, p. 191. Heider treats the relief at pp. 189–192.

<sup>41</sup> Brown 1991, p. 70.

<sup>42</sup> Brown 1991, p. 71.

<sup>43</sup> Brown 1991, p. 71.

<sup>44</sup> Morris 1992, p. 114 n. 60.

<sup>45</sup> Morris 1992, p. 206.

<sup>46</sup> Levenson 1993, p. 46.

<sup>47</sup> Levenson 1993, p. 50.

<sup>48</sup> Rundin 2004, pp. 425–426, p. 426 n. 3.

<sup>49</sup> Rundin 2004, p. 436.

The most significant studies of the relief, however, have been written by Fernando López Pardo. Rejecting the theories of Kennedy and Heider,<sup>50</sup> he considers the nature of the monument as a whole, and brings in a vast array of comparative evidence to support his argument that the scene is chthonic,<sup>51</sup> and that the enthroned figure is to be understood as the gods Nergal and Erra, assimilated to a local deity.<sup>52</sup> There is no doubt at all that the Phoenicians did adopt the worship of Nergal.<sup>53</sup> *KAI* 59.1/2, which was found in the Piraeus and dates from the third century BCE,<sup>54</sup> reads, in Krahmalkov's translation:

I am Asept daughter of Esmūnsillem the Sidonian. Yatonbaal son of Esmūnhalos, Chief Priest of the god Nergal, erected this to me.<sup>55</sup>

However, an insuperable obstacle to López Pardo's argument is that the Phoenician representation of Nergal is known, and it does not resemble the figure on the Pozo Moro relief. Taking the inscription as his point of departure, Lipinski states:

Nergal (*Nrgl*), le dieu babylonien des Enfers, qui fut assimilé à Héraklès à l'époque gréco-romaine, notamment à Palmyre, à Hatre et à Tarse, «Nergal de Tarse» (*Nrgl Trz*) est représenté sur deux monnaies de la fin du V<sup>e</sup> siècle av. J.C., tenant l'arc et une lance ou un scepter, et sur l'une, debout sur un lion, à droite.<sup>56</sup>

Further, López Pardo's argument that the Piraeus inscription must be referring to two deities (so as to match Nergal with the double-headed creature) is not soundly based. López Pardo states that when the text in *KAI* 59.1 refers to the servant of the 'lm, this is the dual or plural form.<sup>57</sup> It is accurate to say that this would be the dual form, and one of the plural forms of 'l, or "god"; however, that word took several forms in Phoenician and Punic, and the plural form 'lm is securely attested for the singular. Friedrich *et al.* say that the plural 'lm "wird oft in singularischem Sinn verwendet."<sup>58</sup>

Although Nergal was a formidable and even fearsome deity, he was not a demon (as the figure in this relief would seem to be) but a god.<sup>59</sup> The positive part of López Pardo's thesis, that this is Nergal and Erra, cannot be supported, at least for the Phoenician representation of Nergal. His negative argument, that there is no depiction of child sacrifice, is stronger.

<sup>50</sup> López Pardo 2009, p. 32.

<sup>51</sup> López Pardo 2009, p. 39.

<sup>52</sup> López Pardo 2009, pp. 40–56. This article updates and revises the views expressed on the seated figure, especially in López Pardo (2006, pp. 145–182). My comments below do not bear on López Pardo's identification of other figures, such as the plumed deity as Šid (2006, pp. 59–72, especially p. 61), which could well be correct.

<sup>53</sup> The history of Nergal is briefly dealt with in Livingstone 1999, pp. 621–622.

<sup>54</sup> Lipinski 1995, p. 242.

<sup>55</sup> Krahmalkov 2000, p. 336.

<sup>56</sup> Lipinski (1995, p. 242), noting that the identification of Nergal and Heracles must go back to at least the fifth century BCE.

<sup>57</sup> López Pardo 2009, pp. 40–56.

<sup>58</sup> Friedrich *et al.* 1999, p. 169, but see also pp. 162 and 215, the second of which gives *KAI* 59.1 as an example of the singular. See also Krahmalkov 2001, p. 126. Rather than treating this as a case of the plural being used for the singular, Krahmalkov states that 'lm is in fact a singular form and that there were three plurals: 'lm, 'lmm and bn 'lm.

<sup>59</sup> Livingstone 1999, pp. 621–622 and the materials there cited. In the same volume, Riley (1999, p. 237) discusses the distinction between deities and demons, and how demons "were often envisioned as composite beings, made up of the frightening aspects of animals, sometimes including human faces or bodies."

## 2 Critique of the Child Sacrifice Theory

Kennedy's thesis is coherent only because he makes use of such a broad range of civilisations in drawing his parallels, resulting in a caricature of "Phoenician sacrifice" which, in some respects, contradicts what we know of Phoenician sacrificial practices. Further, Kennedy pleads a deviation in the transmission when so called parallels diverge from the point under discussion. One example is the Seth figure, which does not at all resemble Seth as depicted in Egyptian art. I shall be contending, therefore, that methodologically, Kennedy's study is unconvincing: he assumes the phenomenon of Phoenician sacrifice, then interpreting the relief in accordance with that assumption, takes it as corroboration.

The fact that Kennedy never refers to the Ahirom sarcophagus shows that he possesses no very deep knowledge of Phoenicia, and that is understandable — Phoenicia is very little studied. But it is not scholarly to try then to force the desired interpretation of Phoenician and Punic art by reference to the cultures of Ugarit, Canaan and Egypt, in diverse periods, when the Phoenician and Punic worlds have not been extensively considered for evidence for or against the putative identification. For example, there is no evidence at all that Phoenician and Punic priests ever wore masks, or that they ever sacrificed pigs. There are several surviving depictions of the priests: they wore a linen *talar* robe which fell to their feet; they could be shaven or not, bareheaded or wearing a veil or conical hat. The animals known to have been sacrificed were cows, calves, sheep, lambs, birds and possibly rams and steers.<sup>60</sup> As one would expect from a Semitic culture, "the sacrifice and consumption of pig was taboo."<sup>61</sup> It is not logical to assert that since this relief *must* depict child sacrifice, the Phoenicians must have had priests who wore animal masks and sacrificed pigs. The question is: based on what we know of the relevant culture, what does the relief show?

I shall also be contending that there is no evidence that the figures in the bowls were children, or that they were sacrificed at all, let alone sacrificed by a "bull-headed priest". In addition to the fact that the "bull" head is by no means certain, there is no evidence whatsoever that the figure is a priest, let alone one who is slaying the children. In fact, if one compares this relief to the other Carthaginian stele which Kennedy says depicts child sacrifice, one can hardly imagine a more different depiction of the stated "priests" and sacrificial scene. To argue as Rundin does that to identify the figure as being a "bull-headed" priest creates a coherent picture of child sacrifice is, once more, to make two errors: it is to assume the unity of the traditions of the Minotaur and this relief, and it is to force the evidence to fit the conclusion that the relief depicts not just child sacrifice, which would be illegitimate in itself, but that it illustrates such a practice in continuity with the Minotaur tradition. In fact, none of the extant Phoenician, Punic or even Greek statements about Phoenician and Punic sacrifice provide any grounds for such a supposition.

Further, the "people", allowing for the sake of argument that they are human, peering out of the bowls do not look dead. Quite the opposite, they are, as Kennedy correctly states, "peering" out of the bowls. The figures are barely half the size of the suckling pig on the table, smaller than the monster's head, and fit into a bowl which the monster holds before him. While we do not have any scale for this picture, as of course the pig could be a large one, *prima facie*, children do

<sup>60</sup> Lancel 1994, pp. 210–212 and the illustration in Markoe 2000, p. 121.

<sup>61</sup> Markoe 2000, p. 121.

not fit into a bowl. Even more radically, how do we know that the figures in the bowl are human? The only one which can be clearly seen is the one held by the monster. Its head resembles the monster's, and that head looks serpent-like to me. I am by no means certain that the feet, which are visible in the bowl, are human feet. They may in fact be animal, most likely marine. As has been correctly noted, the contortions of this figure's body are impossible.<sup>62</sup> The conclusion is hardly warranted that the relief depicts "the glyptic equivalent of a photograph."<sup>63</sup>

Apart from the methodological danger inherent in assuming the presence of an Egyptian deity in this relief, there is no evidence at all that the figure on the right is Seth, whose iconography is quite dissimilar. Although there is excellent evidence for the Phoenician use of Egyptian deities and religious themes in art, the most comprehensive survey of Egyptian gods in Phoenician religion known to me does not make mention of Seth as being recognised in the Phoenician and Punic worlds.<sup>64</sup> Further, the pig is not being presented to the stated "Seth" figure, as one would expect based on Kennedy's argument from comparative evidence about the annual sacrifice of that animal to the god.

Similarly, there is no evidence that the relief is connected with a subterranean place of any description. It does not depict a cavern, nor was the relief itself situated in a cavern; rather, it was sited on a tower. There is no reason to think that the Phoenicians ever made any sacrifices underground. Kennedy insists on this feature so that he can make an allusion to the Book of Isaiah.<sup>65</sup> So, considering the inappropriateness of Kennedy's alleged parallels, and the paucity of evidence for his interpretation, there is no reason to see any sacrifice here, let alone a subterranean one of children.

The second limb of my negative argument is that the sacrifices which I contended elsewhere were *for* children, and some others say were *of* children, are known to have been made to the goddess Tanit and the god Ba'al Hammon, not to Death.<sup>66</sup> Ba'al Hammon has been well represented in ancient Punic art. Xella states that:

Baal Hammon se présente donc comme un personnage barbu et âgé, majestueux et influent: le trône à haut dossier le caractérise principalement, de même que la présence fréquente de deux sphinx (symbole indubitable de royauté) qui en constituent les éléments latéraux.<sup>67</sup>

The evidence is that Ba'al Hammon was a form of Ba'al, the most revered god of the Phoenician pantheon, and that he was not a form of Mot, the death god.<sup>68</sup> While there is no doubt that Philo of Byblos identified the "Kronos" who sacrificed his son with El,<sup>69</sup> he is not the deity to whom the sacrifices were offered. Besides, the identification of Ba'al Hammon with El would make no difference to my thesis, as what is significant in this context is the artwork

<sup>62</sup> Brown 1991, p. 71.

<sup>63</sup> Levenson 1993, p. 20.

<sup>64</sup> Lipinski 1995, ch. 11, "Divinités d'origine égyptienne". For the sake of completion, it should be noted that the name of Seth does appear, with Resheph and Re-Harakhty, on two seals of King Haddamu of Sidon from the thirteenth century BCE (Lipinski 1995, p. 183).

<sup>65</sup> Kennedy 1981, p. 214.

<sup>66</sup> Azize 2007, pp. 201-202.

<sup>67</sup> Xella 1991, p. 127 and also p. 129.

<sup>68</sup> Day 1989, pp. 37-40 on Ba'al Hammon and pp. 40-41 on Mot.

<sup>69</sup> The material is gathered and commented upon by Levenson (1993, pp. 26 and 27).

depicting Ba'al Hammon. Pertinent illustrations are found in Xella's book, and match the description quoted above.

Further, it is usually alleged on the basis of Diodorus Siculus (20.14.2–6) that the Carthaginians had their children consumed by flames. The only way that one can reconcile the figures in this relief with the allegations of child sacrifice levelled against the Carthaginians is to ignore all the details of the sacrifice as stated in the ancient texts except for the one fact that they relate to the slaying of children. It is to be observed that after citing Diodorus and displaying an awareness that the Carthaginians were supposed to have burned the children and then buried them in "tophets", O'Bryhim, following Kennedy and others, says that this relief "provides our only pictorial record of this rite of human sacrifice."<sup>70</sup> So confident are these scholars of the identification that the divergence between the alleged rite as reported and as illustrated here merits no mention.

Neither is there any reason to believe that the figure on the throne is Death. The figure Mot in the Ugaritic texts is never once described as two-headed, a rather remarkable feature, one might have thought. I can see no basis whatsoever for imaging this gruesome scene to be "an anniversary meal for the dead."<sup>71</sup> Kennedy's thesis that the relief illustrates Isaiah 65:4 ("Living among the graves, and spending the night in caverns, eating swine's flesh, with carrion broth in their dishes") is forced: apart from the fact that Isaiah is no authority of any note for Phoenician and Punic religion, this relief does not depict people in a cavern or prowling a gravesite. Whatever it does depict, it is neither human beings nor "a subterranean place at night," as Kennedy asserts.<sup>72</sup>

### 3. The Pozo Moro Relief: A "Grotesque" Parody?

In Part 2 above I have argued that we are not looking at a sacrifice, and certainly not one which involves children. This raises the question of what the relief does depict. The two-headed monster and the strange insouciant figure in the bowl leave no doubt that the artist's conception is rather unusual. I suggest that the relief is in fact better viewed as a parody of the royal presentation scene known from the sarcophagus of Ahirom of Byblos (Fig. 2).<sup>73</sup> This suggestion complements the negative argument: I contend not that it is a parody of a sacrifice, but that it is a parody which does not show a sacrifice.

The presentation scene I refer to is found not only on the Ahirom sarcophagus, but also on three ivories. The first comes from Tell Far'ah (in the Negev area) and dates to the Amarna period (second quarter of the fourteenth century BCE). It is engraved on an ivory box.<sup>74</sup> The second is on another ivory box (pyxis) from the palace of Ashurnasirpal at Nimrod (ninth century BCE),<sup>75</sup> and the third and best preserved illustration is upon what appears to be a dagger sheath, excavated

<sup>70</sup> O'Bryhim 1999, pp. 12–13.

<sup>71</sup> Kennedy 1981, p. 214.

<sup>72</sup> Kennedy 1981, p. 214.

<sup>73</sup> The inscription must be coeval with or later than the carvings. The inscription is not later than the first century of the first millennium BCE, that is, about 900, notwithstanding Wallenfels' argument for a date up to 200 years later, which even so, would still place the sarcophagus well before the Pozo Moro relief (Lehmann 2005, pp. 18–19).

<sup>74</sup> Pritchard, 1980, p. 12.

<sup>75</sup> Oates and Oates 2001, pp. 92 and 227, fig. 54.



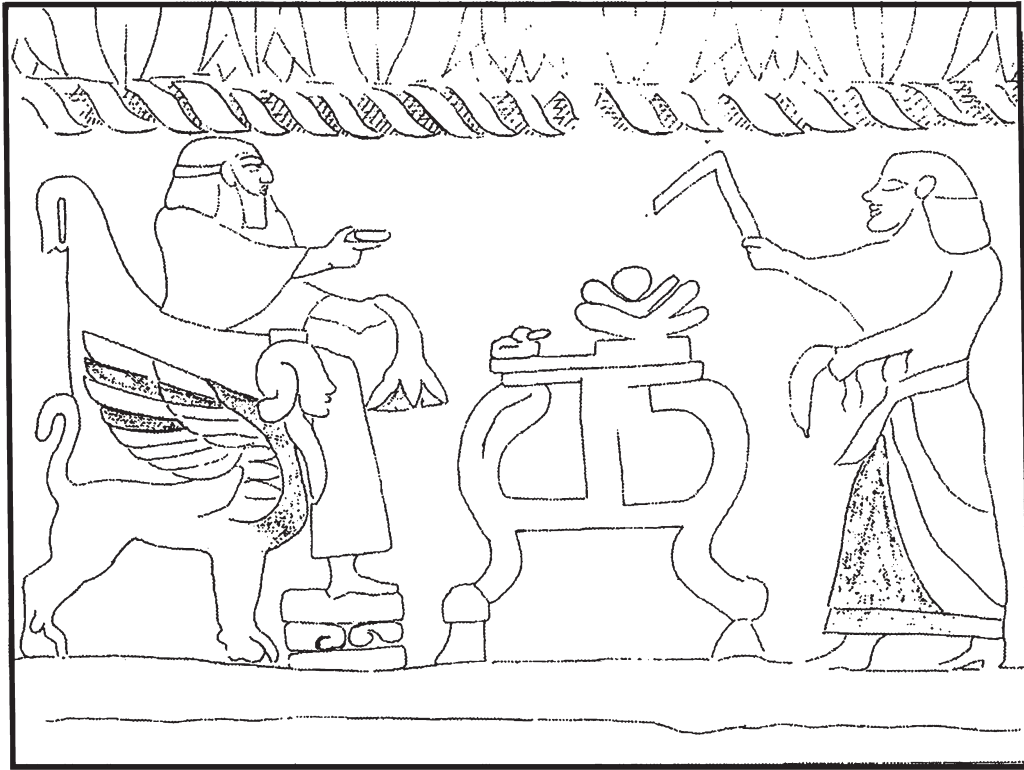


Fig. 2. Detail from the Ahirom sarcophagus.

from the ruins of Megiddo (present day Tell el-Mutesellim) on the ancient route between Egypt and Syria via the plain of Palestine. Stéphan's description of the scene reads:

Le roi assis fêtant son triomphe ... Il tient dans sa main droite une coupe qu'il porte à ses lèvres et de l'autre un lotus dressé. Le côté visible du trône figure un sphinx ailé, de profil. Les pieds du souverain reposent sur un tabouret. Devant lui, debout, vient d'abord la reine vêtue d'une robe longue ... puis une musicienne-harpiste. ... Un dignitaire vêtu du pagne court et droit, porte dans sa main droite un bouclier, dans la gauche une lance.<sup>76</sup>

Of this motif, Stéphan goes on to say: "C'est sans doute là l'un des motifs favoris de l'art phénicien. Il s'est perpétué pendant 400 ans au moins."<sup>77</sup> It would appear, from Pozo Moro, that the theme was known for twice that period at least: about 870 years from the Amarna age to our relief. The similarity between this motif, especially as found on the Ahirom sarcophagus, and our relief is precise. In both works of art we find:

<sup>76</sup> Stéphan 1996, pp. 112–113. I am not reproducing it here, as it adds nothing to the Ahirom carving.

<sup>77</sup> Stéphan 1996, p. 113.

1. An entity enthroned on the left hand side
2. That entity bears a bowl in its left hand
3. An offering on the table before that entity
4. A row of entities standing behind that table, facing the enthroned figure

At Pozo Moro, however, the treatment of the theme is “grotesque”. The grotesque in art can be understood to mean: “Everything which, combined with wit or not, provokes a smile by a real or pretended violation of the laws of Nature and Beauty.”<sup>78</sup> However, the history of the word is quite interesting:

In the classic definition, the term “grotesque” denotes a form of fanciful mural decoration based on a system of images comprising real and imaginary creatures, derived from the animal and plant worlds.... Its roots may be traced back to Hellenistic culture and to oriental decorative ideas, but the grotesque is displayed most fully in the murals of the emperor Nero’s Domus Aurea ... When the ruins of Nero’s palace were rediscovered by chance in the 15<sup>th</sup> century ... contemporary artists flocked there to explore its cavernous interior and to copy its striking mural decorations. ...

What contemporaries found disconcerting in the grotesque was precisely its unreality, the monstrosity and fantasy that animated its inventions ...<sup>79</sup>

The very word “grotesque” was coined at the time of rediscovery to evoke the atmosphere of the cavernous ruins of the Domus Aurea, so similar to grottoes.<sup>80</sup> Zamperini opines that the genre of the grotesque originated in Hellenistic times and is related to oriental mural decorations, but does not explain why she thinks this.<sup>81</sup> If my re-interpretation of this relief is correct, then the Phoenicians, or possibly the Carthaginians, anticipated the grotesque by some years, which is not to say that they invented it, but only that the grotesque style is earliest evidenced among them. The entire genre could be yet another example of “the sophisticated and intellectual exchange between East and West that included mutual admiration of each other’s arts.”<sup>82</sup>

In conclusion then, from both positive and negative considerations, we must say that the Pozo Moro relief does not depict child sacrifice. Even if my assessment of the relief as being a parody of a grotesque nature is not accepted, the relief cannot be taken as extending our knowledge of Phoenician religion or ritual practices. Thus, one more piece in the chain of evidence for a regular practice of child sacrifice among the Phoenicians and Carthaginians disappears.

## Bibliography

Almagro-Gorbea, M.

1983 “Pozo Moro: El monumento orientalizante, su contexto socio-cultural y sus paralelos en la arquitectura funeraria ibérica,” *Madriider Mitteilungen* 24: 177–294.

Aubert Semmler, M. E.

1999 “Spain,” in *The Phoenicians*, edited by S. Moscati, pp. 279–304. New York: Rizzoli.

<sup>78</sup> Wildridge 1899, p. 5.

<sup>79</sup> Zamperini 2008, p. 6.

<sup>80</sup> Zamperini 2008, p. 9.

<sup>81</sup> Zamperini 2008, p. 6.

<sup>82</sup> Morris 1992, p. 100.

- Azize, J.  
2007 "Was there regular child sacrifice in Phoenicia and Carthage?" in *Gilgameš and the World of Assyria*, edited by J. Azize and N. Weeks, pp. 185–206. Leuven: Peeters.
- Bierling, M. R. (ed.)  
2002 *The Phoenicians in Spain*. Winona Lake: Eisenbrauns.
- Brown, S.  
1991 *Late Carthaginian Child Sacrifice and Sacrificial Monuments in their Mediterranean Context*. Worcester: Sheffield Academic Press.
- Bruehl, E.  
1997–2000 "To the Lady Tanit, Face of Ba'al and to our Lord Ba'al Hammon: The Kelsey Squeezes from the 1925 excavation in the Sanctuary of Tanit at Carthage," *Bulletin, Museums of Art and Archaeology, the University of Michigan* 12: 42–69.
- Burkert, W.  
1992 *The Orientalizing Revolution: Near Eastern Influence on Greek Culture in the Early Archaic Age*. Cambridge, Mass.: Harvard University Press.
- Cornelius, Izak  
1994 *The Iconography of the Canaanite Gods Reshef and Ba'al*, Göttingen: Vandenhoeck and Ruprecht.
- Day, J.  
1989 *Molech: A God of Human Sacrifice in the Old Testament*. Cambridge: Cambridge University Press.
- Friedrich, J., Röllig, W., Amadasi Guzzo, M. G. and Mayer, W. R.  
1999 *Phönizisch-Punische Grammatik*. Rome: Editrice Pontificio Istituto Biblico.
- Heider, G. C.  
1985 *The Cult of Molek: A Reassessment* (Journal for the Study of the Old Testament, Supplement Series 43). Sheffield: JSOT Press.
- Kennedy, C. A.  
1981 "The mythological reliefs from Pozo Moro, Spain," in *Society of Biblical Literature, 1981 Seminar Papers*, edited by K. H. Richards, pp. 209–216. Chico: Scholars Press.
- Krahmalkov, C. R.  
2000 *Phoenician-Punic Dictionary*. Leuven: Peeters.  
2001 *A Phoenician-Punic Grammar*. Leiden: Brill.
- Lancel, S.  
1994 *Carthage: A History*. Oxford: Blackwell Publishers.
- Lapinkivi, P.  
2004 *The Sumerian Sacred Marriage in the Light of Comparative Evidence*. Helsinki: The Neo-Assyrian Text Corpus Project.
- Lehmann, R. G.  
2005 *Die Inschrift(en) des Aḫīrōm-Sarkophags und die Schachtinschrift des Grabes V in Jbeil (Byblos)*. Mainz am Rhein: Philipp von Zabern.

- Levenson, J. D.  
1993 *The Death and Resurrection of the Beloved Son: The Transformation of Child Sacrifice in Judaism and Christianity*. New Haven: Yale University Press.
- Lipinski, E.  
1995 *Dieux et Déeses de l'Univers Phénicien et Punique* (Studia Phoenicia 14). Leuven: Peeters.
- Livingstone, A.  
1999 "Nergal," in *Dictionary of Deities and Demons in the Bible*, 2nd ed., edited by K. van der Toorn, B. Becking and P. W. van der Horst, pp. 621–622. Leiden: Brill.
- López Pardo, F.  
2006 *La Torre de las Almas: Un Recorrido Por los Mitos y Creencias del Mundo Fenicio y Orientalizante a Través del Monumento de Pozo Moro*. Madrid: Publicaciones Universidad Complutense de Madrid.  
2009 "Nergal y la deidad del friso del «banquete infernal» de Pozo Moro," *Archivo Español de Arqueología*, 82: 31–68.
- Markoe, G. E.  
2000 *Phoenicians*. Berkeley: University of California Press.
- Morris, S. P.  
1992 *Daidalos and the Origins of Greek Art*. Princeton: Princeton University Press.
- O'Bryhim, S.  
1990 "The *Cerastae* and Phoenician human sacrifice on Cyprus," *Rivista di Studi Fenici*, 27: 3–20.
- Oates, J. and Oates, D.  
2001 *Nimrud: An Assyrian Imperial City Revealed*. London: British School of Archaeology in Iraq.
- Pritchard, James Bennett  
1980 *The Cemetery at Tell es-Sa'idiyeh, Jordan*, Philadelphia: The University Museum
- Riley, G. J.  
1999 "Demon," in *Dictionary of Deities and Demons in the Bible*, 2nd ed., edited by K. van der Toorn, B. Becking and P. W. van der Horst, pp. 235–240. Leiden: Brill.
- Rundin, J. S.  
2004 "Pozo Moro, child sacrifice, and the Greek legendary tradition," *Journal of Biblical Literature* 123: 425–447.
- Stéphan, F.  
1996 *Les Ivoires Phéniciens: 2000 Ans d'Art en Orient* (Bibliothèque de l'Université Saint-Esprit 33). Kaslik, Lebanon: Université Saint-Esprit, Institut d'histoire.
- Tatlock, J. R.  
2006 *How in Ancient Times they Sacrificed People: Human Immolation in the Eastern Mediterranean Basin with Special Emphasis on Ancient Israel and the Near East*. Unpublished PhD diss. University of Michigan.
- Wildridge, T. T.  
1899 *The Grotesque in Church Art*. London: William Andrews & Co.

Xella, P.

1991 *Baal Hammon: Recherches sur l'Identité et l'Histoire d'un Dieu Phénico-Punique*. Rome: Consiglio nazionale delle ricerche.

Zamperini, Alessandra

2008 *Ornament and the Grotesque: Fantastical Decoration from Antiquity to Art Nouveau*, London: Thames and Hudson

Joseph AZIZE  
University of Sydney  
E-mail: joseph.azize@gmail.com

# Historical Continuity in Rural Architecture. The Traces of the *Bit Hilani* Building Tradition in Adiyaman-Kahta, Turkey

Alev ERARSLAN

## Abstract

*Cultural values and traditions are what make societies survive. While these values comprise the histories of societies on the one hand, on the other they provide cultural continuity that can be passed on to future generations. The undeniable relationship between the past and the future, prevailing across history, exists in the field of architecture as well. This paper will try to show that the bit hilani, a type of plan originating from Anatolia/Northern Syria, still survives with its basic architectural characteristics representing “architectural continuity” in the rural architecture of Kahta in Adiyaman. The term “bit-hilani-like structures” is not used here as a flexible term, but intentionally to specifically define the houses in the region. But to be careful, terms such as bit-hilani-like or bit-hilani- type structures and hilani-style structures are used. Kahta’s hilani-like structures occupy an important place within the concept of architectural continuity. Here, the most fundamental factor determining the plan of the houses is the historical element and all the structures have a strong affinity with the architectural tradition of the region. The continuity of the special character of the buildings in the villages, which exhibit a noticeably homogeneous societal structure, constitutes the memory of history in the region. These houses, rooted in history as the symbols of past in the region, make us acknowledge today that bit hilani is still alive with some local adaptations. These structures should be understood as a local heritage of historical hilani tradition.\**

*Bit hilani*, a kind of structure that had its origins in Anatolia/Northern Syria, is a type of plan that was widely used in palace architecture in Anatolia, Syria, Palestine, western Iran and Mesopotamia in the Iron Age. The term entered the scholarly literature in reference to Iron Age royal residences of Neo-Hittite kingdoms in northern Syria and Southeastern Anatolia (Fig. 1). *Hilani* referred to the colonnaded porch characteristic of these buildings. The origin of the term *hilani* is controversial, but it is generally thought that it derives from the Hittite *hílammar*.<sup>1</sup> The Hittite

\* First, a word of thanks to the governor of Adiyaman, Mr. Mahmut DEMİRTAŞ, for his kindness in accepting my study request, and facilitating my contact with all the departments concerned. I also extend my deep gratitude to the District Governor of Kahta, Mr. Metin ESEN, for his efforts in facilitating our work. I am thankful as well for the kind contributions of Prof. Dr Anabel ZARZECKI-PELEG, Prof. Dr Alice MOUTON and Dr James F. OSBORNE in helping me to access sources that I could not reach at the start. I thank Dr Caner GÖÇER, who accompanied me to the district. I am very grateful to Salih CEYLAN, who took on the task of drawing up the maps, graph and all needed plans. And a special thank you goes to the headman of Damlacık village, Mr. Mehmet DEMİRAL, and all the residents of Kahta’s villages, who showered me with warm, cordial hospitality and assistance.





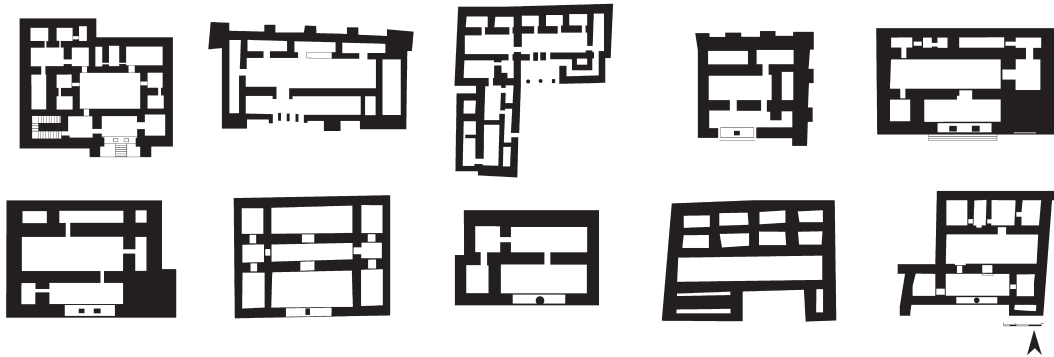


Fig. 3. *Bit hilani* in Tell Atchana (Upper left). Other examples of *Bit Hilani* buildings in northern Syrio-Anatolia (Sharon and Zarzecki-Peleg 2006, fig. 1; Lehmann and Kilebrew 2010, fig. 9; Naumann 1991, fig. 542; Luschan *et al.* 1898, fig. 85–86, Tafel XXVI–XXVII ).

term *hīlammār* is usually translated as “portico”, “gatehouse” or “gate structure” and refers to the columned portico in front of the sacred room (*cella* and *adyton*) that permitted entry into the room. The word is generally viewed as a cognate of the Hittite *hila*–“courtyard” and would imply an open structure.<sup>2</sup> It has also been postulated that the *bit hilani* concept derives from the Iron Age hieroglyphic Luwian *hīlana*, which itself originates from the second-millennium Hittite term *hīlammār*. Singer, however, concluded that it was unclear whether or not the *bit hilani* notion derived from the Hittite *hīlammār*.<sup>3</sup> In the Assyrian records, the term *bit hilani* refers to a component of royal palaces in Assyria understood to include a portico façade.<sup>3</sup> Some of these texts describe the *bit hilani* as an architectural structure within Assyrian palaces built “like a palace of the Land of Hatti” (*tamšīl ekal māt Ḫatti*).<sup>4</sup> Some scholars, however, claim that the term *bit hilani* relates to only a (palace) gate complex, and does not denote the parts of the palace that are most often contained in the foundation of the structure.

Many scholars have attempted to trace the origin of the *bit hilani* back to either the Hurrian or the Hittite building tradition. Whether a building such as Building E at Büyükkale in Boğazköy is an early predecessor of the *bit hilani* has been debated (Fig. 2). Building E consists of a small receiving room that can be dated to the thirteenth century BCE. Two columned porticos stand in front of the structure. Behind the porticos, there is a main room of 12 m × 7 m. This main room is surrounded by smaller rooms. One of these rooms is a stairwell.<sup>5</sup> Frankfort designated Niqmepa’s palace in Alalakh IV as the prototype of the *bit hilani* (Fig. 3).<sup>6</sup> An entry with columns of the *bit hilani* type has been placed here. Recent evidence points to the fact that this type of

<sup>1</sup> Gurney 1954, p. 210.

<sup>2</sup> Mouton and Rutherford 2010, p. 277.

<sup>3</sup> Singer 1975, p. 70.

<sup>4</sup> Lehmann and Kilebrew 2010, p. 24; see also Sharon and Zarzecki-Peleg 2006, p. 145; Osborne 2012, p. 32.

<sup>5</sup> Naumann 1991, p. 466; 1982, pp. 60, 92.

<sup>6</sup> Frankfort 1952, pp. 129–131.

building is most probably a local development from Late Bronze Age Syrian palace architecture.<sup>7</sup> Thus, there is no clear evidence of a Hittite/Anatolian Late Bronze Age origin for the buildings.<sup>8</sup>

Frankfort describes *bit hilani* as two long broad rooms, both with their main axis parallel to the façade. The first is a portico with from one to three columns, often located at the top of a low flight of steps.<sup>9</sup> Behind the portico, entered by a wide doorway, lies the throne room (Fig. 3). Margueron has listed the elements of all *bit hilanis*: an open porch with columns leading to a vestibule and a large main reception hall (throne room) surrounded by secondary rooms forming a suite of bedrooms and bathrooms of varying number and disposition.<sup>10</sup> The buildings were roughly rectangular in shape, typically broad: 30–60 m × 25–35 m in size, and were accessed via a porticoed entrance. They had a series of side rooms arranged around a long, rectangular central room, presumably the main reception hall or a throne room.<sup>11</sup> The porticoes had one to three wooden columns and dominated the façade. The portico could be either at the centre of the façade or off-centre; symmetry was not an important element in the building.<sup>12</sup> The portico led to a broad main hall/throne room. In some cases, a moveable hearth or other installation, such as a dais or podium, was preserved in the throne room.<sup>13</sup> A stairwell was on one side of the portico, the long secondary axis of the building being asymmetrical.<sup>14</sup> The lower parts of the walls and door frames of the façades of many *hilanis* were decorated with orthostates containing depictions of animals and mixed creatures. Several scholars have suggested that the entrance portico was flanked by two towers. These towers, however, are hypothetical and uncertain and cannot be used for defining the *bit hilani* building tradition.<sup>15</sup> Sometimes the structures exhibit a solid mass of masonry which is usually interpreted as a tower. As a rule, if the building proved to be too small, a second *hilani* could be erected near it; these, however, were not integrated with the first building to form a larger architectural whole.<sup>16</sup> So, this type of building could not be expanded indefinitely by the addition of adjoining rooms. The examples that can be cited differ in detail but are alike in essentials; however, the applications of *hilanis* are more irregular, and less rigid and restricted.

## Historical Context

Adiyaman is situated in the north of the region of the mid-Euphrates, in the land lying between the Euphrates River and the Southeastern Taurus Mountain Range. This region harbours the most important cultural legacies of Southeastern Anatolia and the oldest area of settlement, dating back to the Lower Palaeolithic Period of 40,000 BCE, is Palanlı Cave. The province has witnessed

<sup>7</sup> Akkermans and Schwartz 2004, p. 369.

<sup>8</sup> Lehmann and Kilebrew 2010, p. 27.

<sup>9</sup> Frankfort 1952, p. 120; 1956, p. 167.

<sup>10</sup> Margueron 1979, p. 156.

<sup>11</sup> Sharon and Zarzecki-Peleg 2006, p. 145.

<sup>12</sup> Sharon and Zarzecki-Peleg 2006, p. 145.

<sup>13</sup> Sharon and Zarzecki-Peleg 2006, p. 145.

<sup>14</sup> Sharon and Zarzecki-Peleg 2006, p. 145.

<sup>15</sup> Lehmann and Kilebrew 2010, p. 27.

<sup>16</sup> Frankfort 1952, p. 121.

dense settlement throughout the periods of its history. Samosata, Tille, Gritille, and Hayaz *höyük* are some of the major settlements in the city.

The province of Adiyaman was known as *Kummuh* (Kummanni) in the first millennium BCE. *Kummuh* was an Iron Age Neo-Hittite kingdom, located west of the Euphrates between the kingdoms of Malatya to the north and Carchemish to the south (Fig. 1). Evidence for the location of the capital is provided by the Babylonian Chronicle's city of Kimuhi on the bank of the Euphrates.<sup>17</sup> The capital was the predecessor of classical Samosata. The earliest reference to when the kingdom was established dates to *ca.* 870, when its king Hattusili is recorded as a tributary of Asurnasirpal II.<sup>18</sup> The kingdom was founded initially as a sub-kingdom of Carchemish and was part of the kingdom of Carchemish during the reign of Kuzi-Teshup.<sup>19</sup> Before the fall of the Hittite empire, the region encompassed by Iron Age *Kummuh* may have been subject to the Carchemish viceroy. Most of the information about *Kummuh* comes from Assyrian sources. The kingdom of *Kummuhi* was mentioned in the annals of the eighth-century Urartian king Sarduri II and in Luwian hieroglyphic inscriptions from *ca.* 805 to 750. Urartian sources also refer to it as *Qumah*. The name is also attested in at least one local royal inscription dating to the eighth century BCE.<sup>20</sup> Those who ruled *Kummuh* stayed loyal to Assyria, which in turn supported them in their struggles and clashes with other states to the west of the Euphrates.<sup>21</sup> In 866 BCE, the *Kummuh* king Qatazilu paid tribute to the Assyrian king Ashurnasirpal II in the city of Huzirina. In the eighth century, *Kummuh* became the vassal territory of Urartu and was ruled by Sarduri II, but it later reverted to Assyrian sovereignty. Its status was probably privileged in the region during the reign of Sargon II inasmuch as its king Muwatalli provided Sargon II with his loyal support. When Muwatalli fell afoul of Sargon, *Kummuh* was invaded and plundered by an Assyrian army and its population was deported for relocation in Babylonia.<sup>22</sup> The kingdom was then made a province of Assyria and remained so until the empire fell at the end of the seventh century.

The next shining era of Adiyaman was in the period of the Commagene kingdom. Commagene belonged to the Achaemenid empire and its successors before obtaining independent kingdom status in the middle of the second century BCE. Persian forces heading west from Mesopotamia came to prefer the route through Commagene, since the kingdom regulated the Euphrates crossings. The capital was Samosata.<sup>23</sup> The first king of Commagene was Ptolemaeus (163–130 BCE), formerly an officer of the Seleucid empire. The kingdom's wealth was based on trade and agriculture. More is known about the reigns of Mithradates I and Antiochus I. The former built the royal monuments at Arsameia on the Nymphaios.<sup>24</sup> Antiochus I reigned in Commagene from 69 to *ca.* 31 BCE. His father Mithridates was the son of King of Commagene Sames II Theosebes Dikaïos. While the Romans were annexing territories in Anatolia through skilled diplomacy, Antiochus was able to keep Commagene independent. Furthermore, the Romans eliminated the

<sup>17</sup> Hawkins 2000, p. 330.

<sup>18</sup> Bryce 2012, p. 110.

<sup>19</sup> Bryce 2012, p. 110.

<sup>20</sup> Gurney 1954, pp. 39–46.

<sup>21</sup> Bryce 2012, p. 110.

<sup>22</sup> Bryce 2012, p. 111.

<sup>23</sup> Weiskopf 1992, p. 55.

<sup>24</sup> Weiskopf 1992, p. 55; see also Wagner 1983, p. 179.

Armenian threat at this time. There were three main cities in the kingdom: Samosata, Arsameia on the Nymphaios, and Arsameia on the Euphrates, the latter two improved by Antiochus I. The royal burial monuments of Commagene, where priests in Persian costume presided over religious festivals, remain well known to this day.

In the Hellenistic era, Commagene came under the Seleucid empire and was intermittently subject to Armenia's rulers, who were Seleucid in name. The Seleucid domination of Commagene began at the latest under Antiochos III. Commagene was eradicated in Anatolia in 72 AD by the Romans and transferred to the rule of the state of Syria.<sup>25</sup> The region subsequently yielded to the reign of the Umayyads (670–758), the Byzantines (958–1114), the Danişmends (1072), the Anatolian Seljuks (1126) and the Ottomans (1516). The name of the city in antiquity and in the Byzantine era is unknown. In the Middle Ages, the city came to be one of the border strongholds of the Islamic world.

### Plan Typologies of *Bit Hilani*-Like Structures in Kahta's Villages

The region of Adıyaman is one of the most outstanding of the areas of Southeastern Anatolia that contain ruins attesting to the legacy of rural architecture and culture (Fig. 4). The region represents a significant reflection of the common historical memory of rural populations on the spatial fabric. The elements of rural settlement in the area are rich with examples of the regional architecture of Southeastern Anatolia and the houses that comprise village settlements display historical plan types.

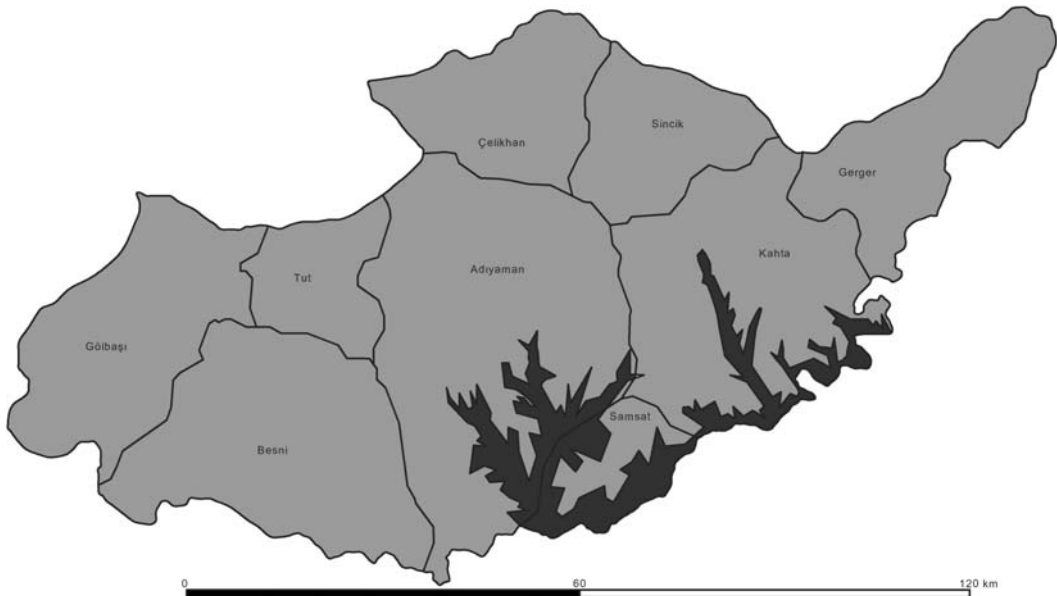


Fig . 4. Adıyaman Region (drawn by Salih Ceylan).

<sup>25</sup> Demir 2004, p. 229.



Fig. 5. The studied villages in the Kahta region (drawn by Salih Ceylan).

This research was carried out for the purpose of investigating the *bit hilani*-like structures in the region. The research was carried out in a total of 24 mountain villages located south of the South-eastern Taurus Mountains to the north of Kahta, on the north side of the Adıyaman-Diyarbakır highway. These villages were Damlacık, Narince, Eceler, Kavaklı, Karadut, Eski Kahta, Esendere, Koçtepe, Akpınar, Sırakaya, Kayadibi, Akdoğan, Bağbaşı, Doluca, Teğmenli, Kozagaç, Yolaltı, Gölge, Akkavak, Aydınpınar, Dumlu, Burmapınar, Silver and Alıdam (Fig. 5).



Kahta (former Kocahisar), which is 35 km away from the city of Adıyaman, is the largest and most crowded town in Adıyaman (Fig. 4). Moving south from the mountainous area, plateaus are followed by vast plains. The centre of the district has been established on flatland. The need for security and hydrographical features played a role in the selection of this inaccessible mountain region as a location for settlement. The prevailing conditions, however, have prevented the emergence of major settlements. Small villages and hamlets define the dominant character of settlement in the region. In general, the region has a settlement pattern of scattered texture. Hamlets have developed in the areas along the slopes where water sources are located. The region is rich in water sources. Land on topography that is mountainous and on an incline is limited in its suitability for agricultural activity. Agricultural land is confined to the forests and grasslands situated on the alluvial cones and valley terraces; for this reason, animal husbandry is more developed than agriculture in this area.<sup>26</sup>

The term “*bit hilani*-like structures” was not used here as a flexible term, but intentionally to specifically define the houses in the region. Our reason for using this term was provided by other researchers. F. K. Dörner and R. Naumann, who executed a surface exploration in the region in the 1930s, identified the houses in the region as *hilani*-style buildings because of some characteristics in common with the historical *hilanis*.<sup>27</sup> The main reason these researchers treated these houses as being in the *hilani* style or as *bit hilani*-type structures was their common characteristic of consisting of an open columned portico with a broad room behind it. The main axis of the portico and broad-room is parallel to the façade. The other rooms of the building are arranged around this principal motif.<sup>28</sup> The most characteristic feature of these houses is that their entrances resemble the open pillared/unpillared porticos of the historical *hilanis*.

A scan of the literature on the subject showed that there were a large number of houses of the *hilani* type in almost all of the villages at the beginning of the 1900s.<sup>29</sup> Upon starting the investigations, however, despite the fact that the information from the literature was confirmed by the people of the region, it was seen that the situation now was different. While it was asserted that houses of the *hilani* type were quite numerous until recently, only about 10 per cent are still standing. In one of the larger villages (*nahiye*), called Damlacık, for example, although our sources stated that these types of houses were abundant, it was observed that only one existed at the time of our visit (Fig. 6). In the same way, the villages of Karadut and Eceler appear to have sustained substantial losses. Two other villages, Narince and Eski Kahta (Old Kahta), have resisted the effects of time and changing construction systems, and are heartening examples of regions that have managed to preserve these houses. In Narince today, 30 per cent of the *hilani*-style structures are still standing. In Eski Kahta, however, the percentage of houses still upright falls to 15 per cent. Narince village, which today lies 30 km away from the centre of the district of Kahta, is in a distinctive position in terms of settlement hierarchy. All of the *bit hilani*-like structures in Narince are larger than in the other villages. These larger-sized houses can be described as *konak* or “mansions”, reflecting higher levels of socio-economic status (Fig. 6).

<sup>26</sup> Karadoğan 2005, p. 58; see also Demir 2004, p. 227.

<sup>27</sup> Dörner and Naumann 1939, pp. 12–13; see also Herzfeld 1909, p. 28.

<sup>28</sup> Dörner and Naumann 1939, pp. 12–13; see also Herzfeld 1909, p. 28.

<sup>29</sup> Dörner and Naumann 1939, pp. 12–13; see also Herzfeld 1909, p. 28; Erdim 1980, pp. 10–14; Akın 1985, p. 17.

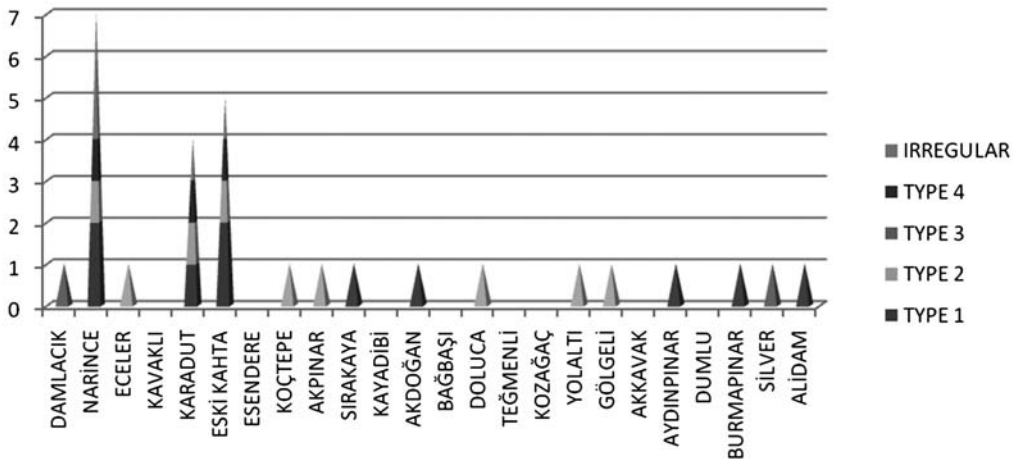


Fig. 6. Graphic showing the dispersion of the plan types according to the villages (created by Salih Ceylan).

When the plan typologies of the houses in the region are surveyed, the common motif in all of the houses, as mentioned above, is a columned/uncolumned open portico and, within, a broad room behind it, its main axis parallel to the façade. The other rooms of the buildings are arranged around this main motif. Kahta's *hilani*-like structures are of four main types, according to the room organisation of the main plan layout (Fig. 6):

- Type 1:** This is the most common type of plan, appearing in almost every village in the region. In this type, there is an open columned/uncolumned portico on the façade. Behind and parallel to the portico, a long broad room runs across the full width of the house. This is the largest room of the house and has the average dimensions 10 m × 3 m. A symmetrical broad room is located on each of the two sides of the portico. The length of the side rooms has been kept equal to the length of the portico (Figs 7–10).
- Type 2:** This is the other plan type used in the region. Here, again there is a broad room behind the columned portico. But this time, the portico and the broad room have the same dimensions and the main axis of each is parallel to the façade. The symmetrical side broad rooms are located on the wings of the columned portico, reaching back along the full length of the house. Thus, the columned portico and the broad room behind it are situated between the two side rooms. In this plan type, the largest rooms of the house are the two side rooms (Figs 11–15).
- Type 3:** This is the other general plan design in the region. Again, there is an open columned/uncolumned portico on the façade. Behind the portico are two broad rooms, side by side. Another symmetrical broad room is situated on each side of the portico and the length of these rooms has been kept equal to the length of the portico, as in Type 1. The most spacious rooms of the house are the two broad rooms behind the portico, the average dimensions of which are 4 × 5 m (Figs 16–20).

**Type 4:** Here, behind the wooden columned portico are four broad rooms, back-to-back. The back rooms are used as storage and they are narrower than the front broad rooms. A broad room is situated on each side of the portico and the length of these two rooms is equal to the portico. These are larger houses and may be called *konaks* or mansions (Figs 21–24).

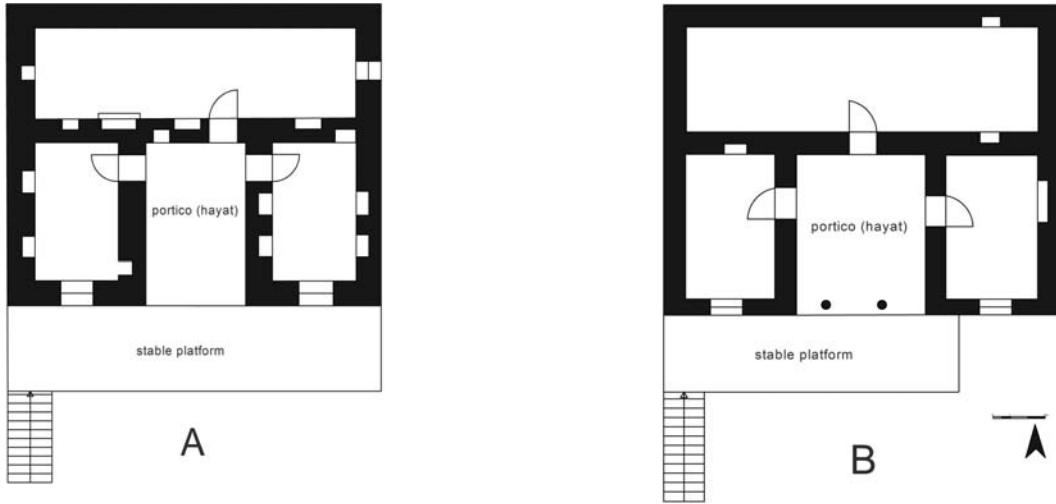


Fig. 7. Type 1 (drawn by Salih Ceylan).



Fig. 8. House A built in Type 1 in Narince. The portico (*hayat*) is closed later (house of Isa Gülmez).



Fig. 9. Later closed portico without column of the same house.



Fig. 10. The portico (*hayat*) with column in House B, built in Type 1 in Eski Kahta (house of Mehmet Yurt).



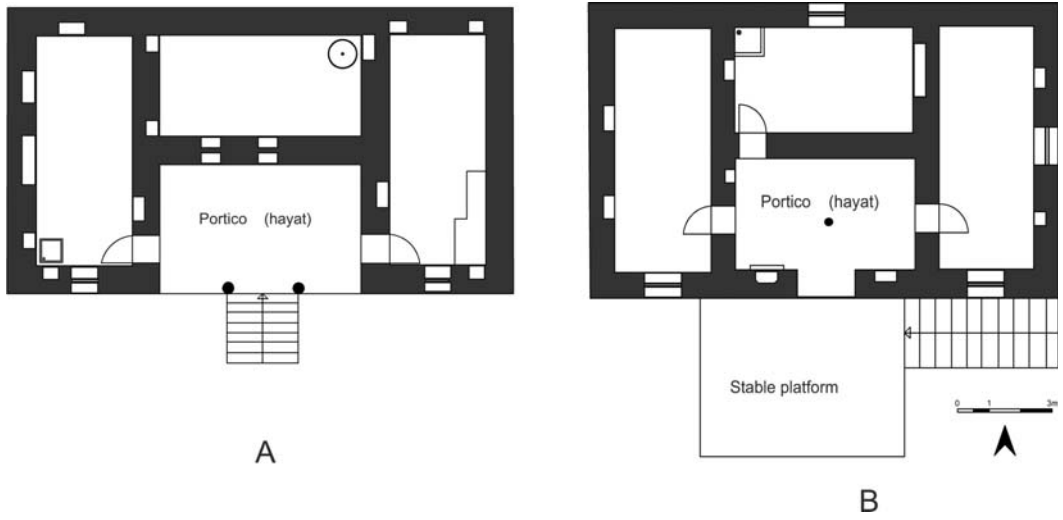


Fig. 11. Type 3 (drawn by Salih Ceylan).



Fig. 12. House A built in Type 3 in Damlacık. The portico (the *hayat*) with wooden columns (house of Zekiye Er).



Fig. 13. The portico (*bayat*) of the same house.



Fig. 14. House B, built in Type 3 in Silver (house of Mustafa Tekdemir).





Fig. 15. The portico (*hayat*) of the same house.

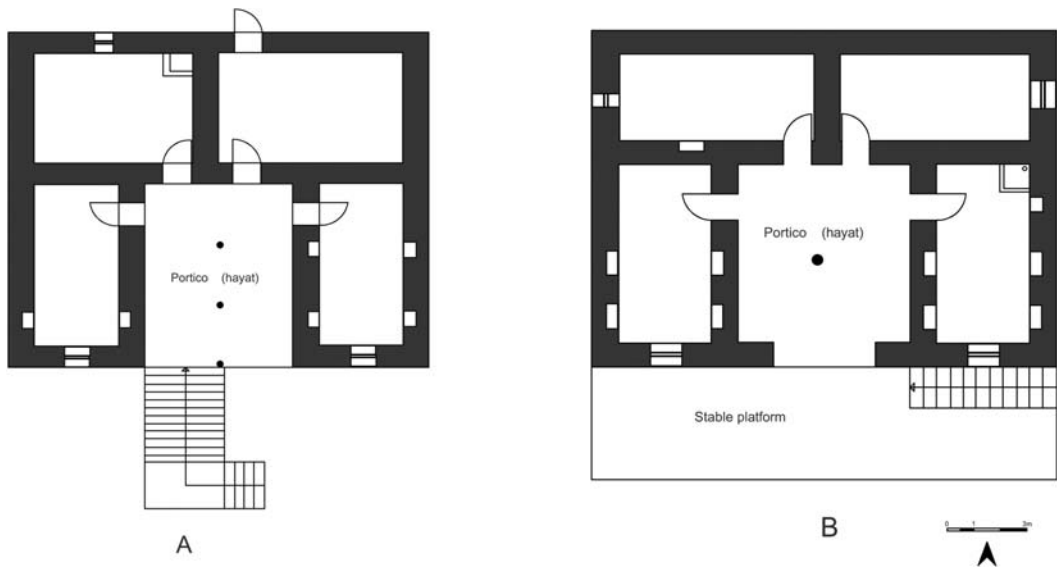


Fig. 16. Type 2 (drawn by Salih Ceylan).



Fig. 17. House A, built in Type 2 in Narince.  
The lower part of the portico (the *hayat*) is closed later (house of Yakup Erden).



Fig. 18. The portico (*hayat*) of the same house.



Fig. 19. House B, built in Type 2 in Narince. The portico (*hayat*) is closed later (house of Mustafa Dişbudak).



Fig. 20. The portico (*hayat*) of same house.



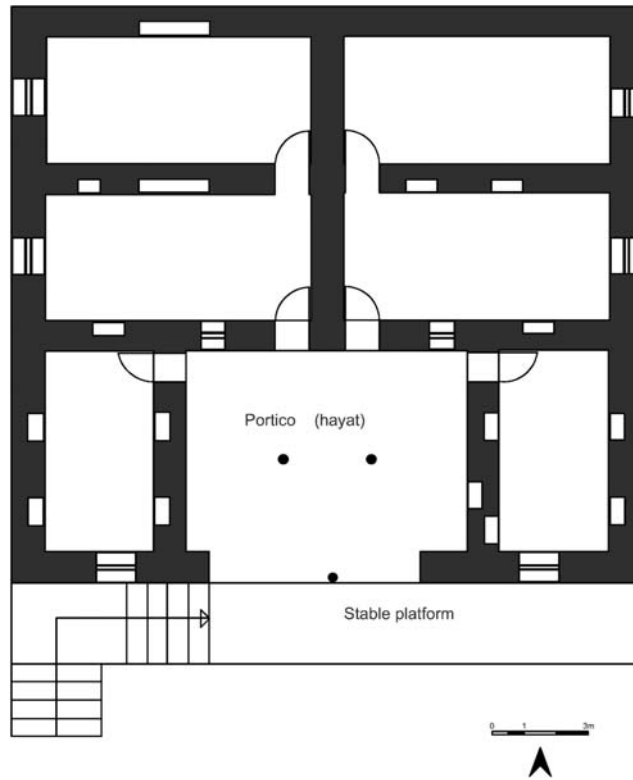


Fig. 21. Type 4 (drawn by Salih Ceylan).



Fig. 22. The house built in Type 4 in Narince (house of Emin İnan).



Fig. 23. The portico (*hayat*) with wooden columns of the same house.



Fig. 24. The portico (*hayat*) with wooden columns of the other house built in Type 4 (house of Osman Dişbudak).

Other than these main types, different practices can be seen as the result of topographical constraints and sometimes personal choices. In such examples, the symmetry of the houses is spoiled. Since these buildings are only individual examples and are based on certain subjective criteria, they can never be regarded as a sub-type. Type 1 and Type 2 are used for these irregular examples.

In the first case, the house is based on Type 1. One of the rooms alongside the portico has been laid out asymmetrically. This room runs along the full side wing of the house. Because the length of the room on the other side has been kept equal to the length of the portico, the symmetry of the house has been marred. This style seems to be individual preference (Figs 25: A, 26).

The other irregular examples appear to have arisen entirely for topographic reasons. In two instances, based again on Type 1, the road passes by the back of the houses. To gain space for the road, the broad room behind the portico is not extended along the back of the side room on the eastern wing of the portico. Thus, an empty area appears at the back of the house to allow for the road on the east. This time, however, symmetry has been espoused both in the façade and in the direction and dimensions of the rooms (Figs 25: B, C, 27–30).

Another example, where the organisation of rooms has changed due to the narrow area in front of the house, can be seen in a house constructed according to Type 2. Here, the side room on the east wing of the portico has been kept short to make way for a set of stairs in the narrow area of the front of the house, and this side room has taken the form of a small rectangle. The symmetry of the side rooms has thus been broken (Figs 25: D, 31).

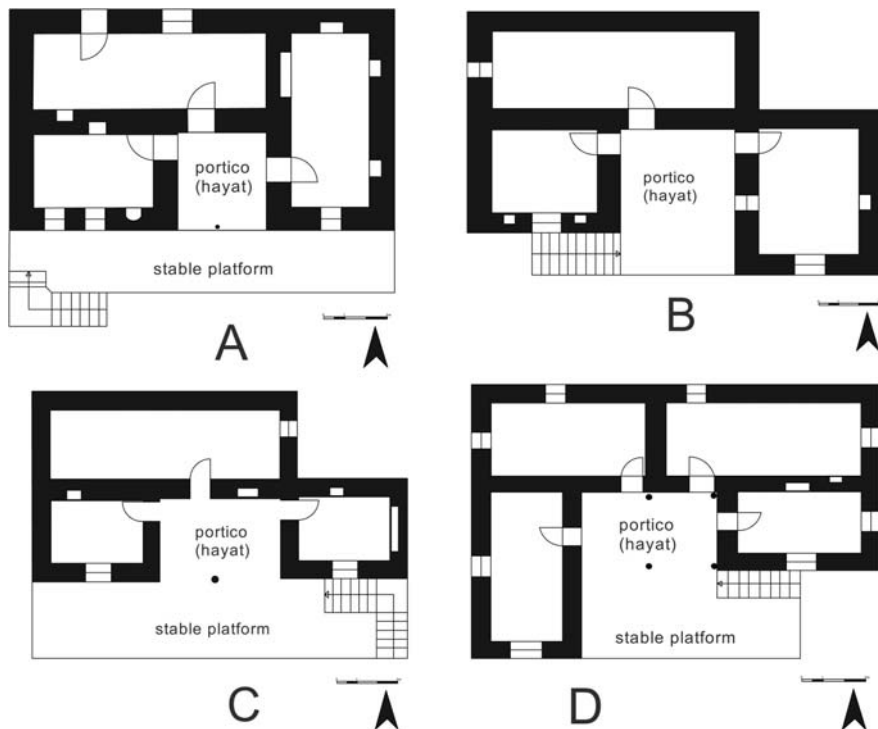


Fig. 25. Irregular Types A, B, C, D (drawn by Salih Ceylan).





Fig. 26. Irregular Type A in Gölgei (house of Mehmet Uzun).



Fig. 27. Irregular Type B in Aydınşınar (house of Emine Kaya).



Fig. 28. The portico (*hayat*) of the same house.



Fig. 29. Irregular Type C in Eski Kahta (house of Yusuf Başyemez).





Fig. 30. The portico (*hayat*) of the same house.



Fig. 31. The portico (*hayat*) of irregular type D in Eski Kahta (house of Muzaffer Ulu).

### General Characteristics of Kahta's *Hilani*-Like Structures

In the *hilani*-style houses of the villages surveyed, some general common features are exhibited besides the plan types. All of the houses have been established in a north-south direction. They are freestanding and self-contained, and constitute a horizontal rectangular mass. The average age of all of the examples, according to the testimony of their owners and other villagers, is 80 years. The full age range of the houses is not known. The houses are single-storey structures and situated generally on a stable platform that is accessed by stairs or a ramp. All examples are massive and monumental structures. All the structures have thick walls, of nearly 80 cm; however, these walls were not constructed on these single-storey structures to support a superstructure of considerable height, but can rather be explained by the desire to create a massive look. The buildings are not extended by the addition of adjoining rooms; instead, a second *hilani* is erected nearby.

The general layout of the structures consists of an open columned/uncolumned portico and one broad room behind that, with its main axis parallel to the façade. The buildings have direct access and their principal portal is on the broad main axis. When the villagers were asked what name they gave to the portico/vestibule, they stated that it was called *hayat/hayut*, which in the dialect of the region means "salon or living room". The portico (we will hereafter call this space the *hayat*) is the main element determining and shaping the plan. In terms of form, the *hayat* is sometimes close to the shape of a square, but generally it is broad. In cases where the *hayat* is a square, it resembles an *iwan*. The *hayat* generally has wooden columns; however, in some examples, this is not the case. The *hayat* is the centre of the house and serves many functions. It is the entrance hall to the house, the main area of circulation, the family common space, a main room, as well as a household activity area and a production space. The *hayat* is surrounded by rooms that are not connected with one another. All the rooms open onto the *hayat* alone; it is the only circulation space. The *hayat* is roofed and open to the outside. It serves as a space that connects the house with the outside world (the street) and thus provides continuous interaction between the activities taking place in the outside environment and the activities occurring inside the house. Although the rooms have windows, the *hayat* is the main source of light and fresh air in the house. In summer, the *hayat* provides an outdoor area. Some *hayat* structures have been enclosed for reasons of security or to ward off the cold, and such cases, the house's connection with the outside and the light was cut off, with the *hayat* turning into a fully closed chamber. Closed *hayat* examples have sometimes preserved their columns.

The houses have colossal and symmetrical façades. They are accessed via an entryway in the front of the open columned portico. The open columned/uncolumned *hayat* in the middle and the windowed rooms on the two short sides constitute a three-element symmetry in the façade. The columned/uncolumned *hayat* is the hallmark of these buildings. The short axes to the symmetrical side rooms also give the appearance of corner towers. The preoccupation with symmetry indeed gives these structures a special identity and extra monumentality. The two side wings of the houses are usually blind, though sometimes small windows can be encountered on the rear walls.

The main room or reception room differs in each house. In some houses, the broad room behind the columned/uncolumned portico (*hayat*) functions as a main room or a reception room, as in the historical *hilanis*, while in some houses, this function is served by one of the two side

rooms. The *hayat* itself serves as a reception room in the summertime. There are usually symmetrical niches of different dimensions in each room. These niches are used as storage cabinets (*yüklük*) or serve other purposes.

The kitchen also varies from house to house. In the case of the two parallel long broad rooms running side by side behind the *hayat* (Type 3), one of these rooms (generally the one on the west side) serves as a kitchen. In some examples, however, one of the rooms alongside the portico is the kitchen. While the hearths are generally found in the space used as a kitchen, some hearths are situated in the *hayat*. The toilets of the houses are outdoors and arbitrary rooms have been equipped with a bathing depression to give them the identity of a bathroom.

To extend the houses, an additional room was added to each back room, or the room adjacent to the *hayat* would be separated into two rooms with a wall, thereby increasing the number of rooms overall. Additions to the sides of the houses were avoided so that the symmetry of the façade was preserved. In other words, closed spaces were not extended.

The construction technique used in the structures is masonry construction. Stone has only been used as a construction material. The walls consist of timber frameworks comprising a horizontal wooden grid made of longitudinal and transversal members and/or vertical posts on each face of the stone wall. The structural use of wood in these houses reinforces the stone walls to distribute their weight horizontally, thereby strengthening the structure against horizontal loads and preventing vertical cracks. The horizontal wooden beams used as connective elements are employed as lintels on the upper and lower parts of windows and doors, with the additional objective of reinforcing the structure against earthquakes. The purpose of these horizontal wooden supports is to render the stone wall durable where otherwise it would be non-resistant and prone to cracks. The wall beams on these structures, built in wood and filled with stone, also serve the purpose of supporting the bracing underneath the roof beams and crossbeams. Poplar wood is used in the beams and crossbeams of the walls and roofs. The villagers state that they used to grow poplars to be used for construction work. The roofing system of the houses is a flat roof that is constructed from poplar planks closely laid out on top of the crossbeams and on the short sides of the walls of the rooms. The roof is in turn covered by a layer of reeds, usually running across the rafters, and then by a final clay coating. There is little evidence in the houses of internal rows of supports. Without internal supports, the roofs of the houses were supported by the walls themselves. It is for this reason that a timber framework was employed to reinforce the walls. Some of the walls are coated with mud-plaster and painted in white.

### Comparison of the Historical *Bit Hilanis*

When the *hilani*-like structures of Kahta are compared with historical *hilanis*, it can be seen that they exhibit some common aspects as well as characteristics that are different. The basic aspect where the two are similar is that, no matter which type of plan they employ, all of Kahta's *hilani*-like structures exhibit the main element of a broad open portico with columns (*hayat*) and a broad room behind it. They also have the front colonnaded porch entrance of the *bit hilani*, an unchanging motif of all historical *hilanis*. Other general similarities are that they have a north-south orientation and a roughly rectangular shape, are freestanding and self-contained,

are direct-access buildings, are raised structures that contain stairs in the middle of the façade, and contain rooms around the main room/hall that are not in communication with one another. In addition, they are never extended by the addition of adjoining rooms.

The most important similarity between Kahta's *hilani*-like structures and the historical *hilanis* is the way the rooms are arranged on the two sides of the portico. As described in detail above, the plan typology of Kahta's *hilani*-like structures is based on how the rooms are organised around the main layout of the open columned/uncolumned portico parallel to the façade and a broad room behind it. In Kahta's *hilanis*, the organisation of the rooms on the two sides of the portico (*hayat*) takes two different forms. The first is Type 2, where there are symmetrical broad rooms on either side of the portico/*hayat* reaching the full length of the house (Fig. 11). This style resembles both *hilani* in Tell Halaf and *bit hilani* suites in the Assyrian palaces. The West Palace in Tell Halaf, measuring about 57 m in length by 30 m in width, was constructed in the North Syrian *hilani* style. It comprised a pillared portico and a long central main hall, measuring some 37 m in length and 8 m in width.<sup>30</sup> The structure's entrance opened to the north onto a large raised terrace, with access provided by a staircase within a small open forecourt. A row of three small rooms lay beyond the two central areas. Symmetrical broad side rooms are located on the two wings of the portico, reaching the full length of building, as in Kahta's Type 2 (Fig. 32A).

Other examples of this side room style are seen in the *bit hilani* suites in the Assyrian palaces. *Bit hilani* was foreign to Assyrian architecture and only started to be seen as a new element during the era of Tukulti-apil-Ešarra III, starting in the seventh century, when the Assyrian state engaged in close relations with Syria.<sup>31</sup> The Assyrian kings adopted the *bit hilani*, starting with Tiglat-Pileser III (745–727 BCE), and their architects wedded it to local types of suites. The adoption of the porticoed entrance with multiple columns is evident in Assyrian palaces at Dur-Sharrukin (Khorsabad) and Nineveh.<sup>32</sup> The layouts of a North Syrian *hilani* and an Assyrian suite are not just conceptually similar, but are very close in detail.<sup>33</sup> The Assyrians used the *bit hilani* as an independent architectural element, not in the whole plan of the structure but sometimes in the entrance (a columned portico) or a single suite of a large palace complex.<sup>34</sup> One or more of the private suites of the palaces were constructed in the *hilani* style. Access to these suites was generally through a portico with one or two wooden columns. The concept of the *hilani* in the palace complexes manifested as suites arranged around a courtyard, composed of small rooms of various sizes and dispositions, set up around two salons situated one behind the other with their main axes parallel to the courtyard.<sup>35</sup> Sargon asserts that he enriched all palaces with *bit hilani*: "A portico patterned after a Hittite palace, which they call a *bit hilani* in the Amorite tongue, I built in front of the palaces gates."<sup>36</sup> Sargon's comments on the palaces in Dur Sharrukin, which he built in the same way, also refer to gates in the *bit hilani* style in front of the palaces:

<sup>30</sup> Orthmann 2002, p. 36.

<sup>31</sup> Sevin 1991, p. 111.

<sup>32</sup> Akkermans and Schwartz 2003, p. 384.

<sup>33</sup> Halpern 1996, p. 49.

<sup>34</sup> Sevin 1991, pp. 109–100.

<sup>35</sup> Sevin 1991, p. 104.

<sup>36</sup> Frankfort 1952, p. 126.



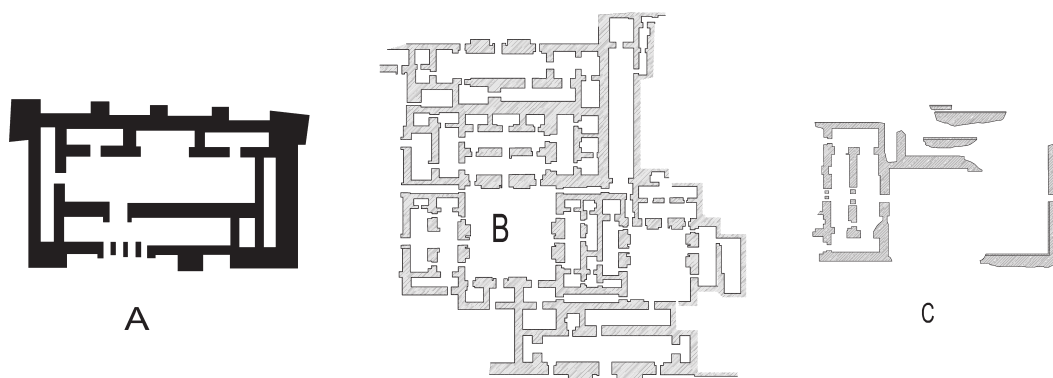


Fig. 32. Tell Halaf (A), Nineveh Sennacherib Palace Kalhu (B), Southwest Palace of Esarhaddon (C) (Sharon, and Zarzecki-Peleg 2006, p. 1; Russell 1999, fig. 47; Harrison and Osborne 2012, fig. 3).

Palace of Sargon, prefect of Enlil, priest of Assur the mighty king, king of the universe, king of Assyria....Following the prompting of my heart, at the foot of Mount Musri, I built a city and called its name Dur Sharrunkin....Palaces of ivory, maple, boxwood, mulberry, cedar and cypress, juniper, pine and pistachio-wood I built therein and erected a *bit hilani*, patterned after a Hittite palace, in front of their gates.<sup>37</sup>

As there is no doubt about the existence of a triple portal entrance, a problem occurs when attempting to reconcile the generally accepted definition of a *bit hilani* with the plan of the main palace entry. L. J. Winter has revived the discarded theory that in Assyria, a combination of features distinguished the *bit hilani* from local buildings.<sup>38</sup> Observing the manner in which the Assyrians adopted elements from neighbouring cultures and altered them to make them identifiably Assyrian, scholars have suggested that rather than imitate the complete plan of these buildings, the Assyrian monarchs only transposed certain prominent features, such as the columned portico, into the plans of their royal palaces.<sup>39</sup>

In the imitations of *hilani* suites in the Assyrian palace complexes, the side room organisation on the two wings of the portico resembles Type 2 of Kahta's *hilani*-like structures. Some of the best examples of this application can be seen at Nineveh Sennacherib Palace, the Kalhu Southwest Palace of Esarhaddon and Khorsabad Residences (Fig. 32B, C). In all of these cases, the throne room consists of two long broad rooms with triple portal entrances. The symmetrical broad rooms on either side of the portico/*hayat*, extend along the full length of the structure. The side rooms of the *hilani* of Tell Halaf and Assyria, however, open out onto the main room (throne room) as well as the portico, while in Kahta's *hilani*-like structures, they open out only onto the portico (*hayat*).

In terms of side room organisation in Kahta's *hilani*-like structures, the second style can be seen in Types 1, 3 and 4. Here, the length of the symmetrical side rooms on the two sides of the

<sup>37</sup> Glynn 1994, p. 1.

<sup>38</sup> Winter 1982, p. 357.

<sup>39</sup> Frankfort 1952, p. 120; see also Winter 1982, p. 355.

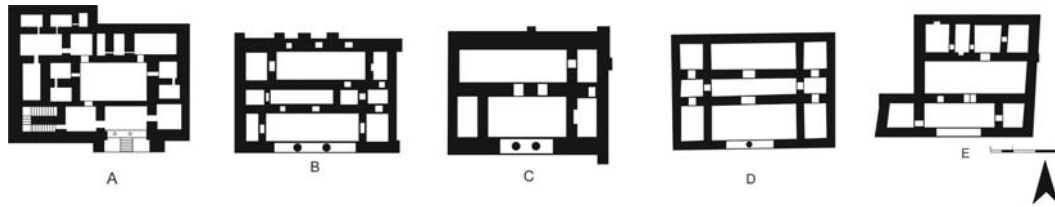


Fig. 33. Tell Atchana (A), Arslan Taş Tigratpileser III Palace (B), Koyuncuk Assurbanipal *Hilani* (C), Zincirli Upper Palace (D) (Luschan *et al.* 1898, fig. 85–86, Tafel XXII, XXVI; Naumann 1991, fig. 542).

portico (*hayat*) has been kept equal to the portico (*hayat*) (Figs 7, 16, 21). This practice closely resembles the historical *hilanis* of Syria, Israel and the Hittites. The feature where the entrances to the side rooms are symmetrical and there is never an entry door to the main room (throne room) from the side rooms resembles the *hilanis* of Tell Atchana, the Arslantaş Tigratpileser III palace, the Palace of Niqmepa of Alalakh, the Koyuncuk Assurbanipal *hilanis* and *hilanis* I and II at the Zincirli Upper Palace (Fig. 33A–D).

Besides these similarities between Kahta's *hilani*-like structures and the historical *hilanis*, there are also certain differences. The fundamental element that separates Kahta's *hilani*-like structures from the historical *hilanis* is the organisation of rooms behind the main room (to the north). In the historical *hilanis*, the large main hall/throne room was located in the centre of the building and surrounded by a series of smaller auxiliary rooms and bathrooms of varying number and dispositions (Fig. 3). There was no communication between these rooms. But, in Kahta's *hilani*-like structures, the row of small rooms behind the main room has been eliminated. This room does not have smaller room units or adjoining rooms opening onto it from the north. It is sometimes arranged as one broad room (Type 1, Type 2), sometimes as two broad rooms that are placed side by side (Type 3), and sometimes as four broad rooms, back to back (Type 4) (Figs 7, 11, 16, 21).

Type 1 and Type 2 of the Kahta's *hilani*-like structures are essentially built around two centrally located broad rooms whose main axes are set parallel to the entrance façade, formed by a columned portico (*hayat*). This arrangement resembles the throne rooms of the principal reception suites of Assyrian palaces. The basic plan of the Assyrian palatial suites consisted of two or sometimes three transverse rooms that are placed one after the other, fronted by a monumental façade (Fig. 34A, B).<sup>40</sup> They represent a modified version of the *bit hilani*. The other example of this style is seen in the Upper Palace of Zincirli. Here, it is marked by two adjacent broad rooms and recalls Assyrian usage (Fig. 34C).

Type 3 of Kahta's *hilani*-like structures have two broad rooms side by side behind the portico. This arrangement recalls Tell Tayinat I. Here, the main room, as in the Type 3 style of Kahta's *hilani*-like structures, features two broad rooms laid out side by side (Fig. 35). Tell Tayinat I measures approximately 58 m × 29 m. It comprises a colonnaded porch, with two broad central main rooms separating a row of small rooms on one side, and a porch, staircase, and two other rooms on the other. Here, the two broad main rooms are set out side by side and run parallel to

<sup>40</sup> Turner 1970, pp. 211–212; see also Winter 1982, pp. 361–363.

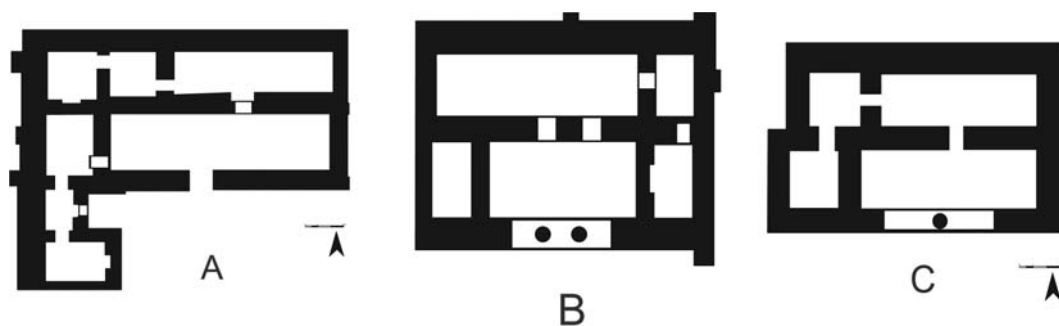


Fig. 34. Arslan Tash Tiglatpilesar III palace (A), Asurpanipal's Hilani (B), Zincirli *hilani* I (C), (Sharon and Zarzecki-Peleg 2006, fig. 1; Luschan *et al.* 1898, fig. 86; Naumann 1998, fig. 566).

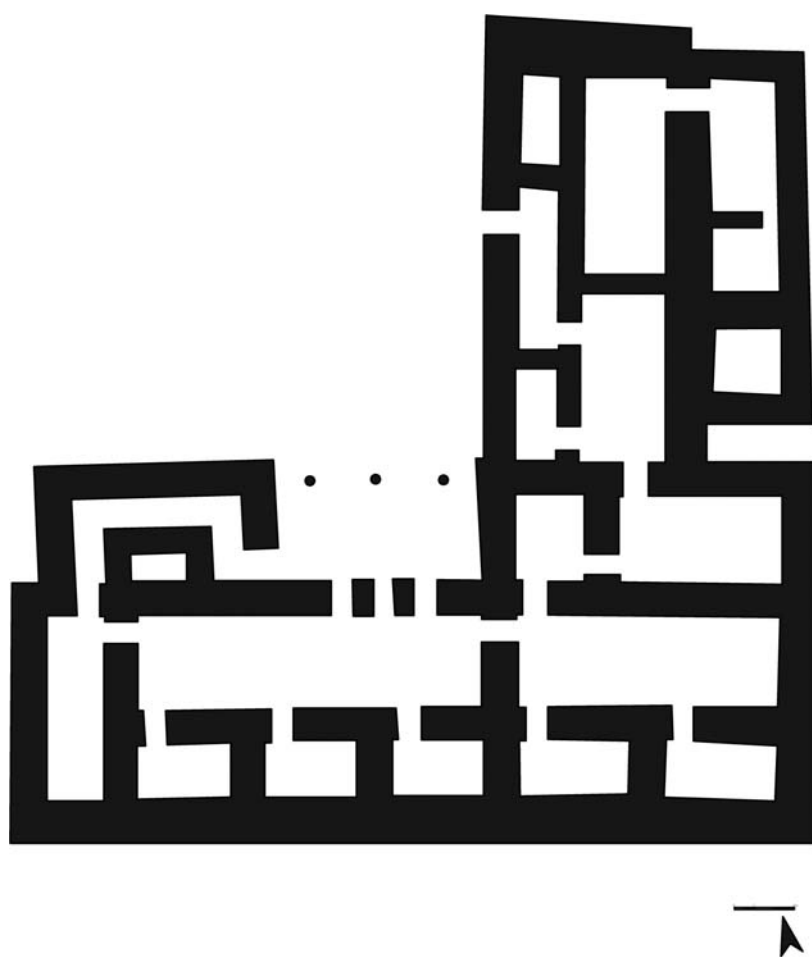


Fig. 35. Tell Tayinat. Building I (Osborne 2012, fig. 13).

the back of the columned portico, extending along the width of the structure.<sup>41</sup> There is, however, a door between the two side-by-side broad rooms in Tell Tayinat I, whereas in Kahta's *hilani*-like structures, there is no connection between rooms and both rooms are accessed directly through the portico (*hayat*).

Another distinction between Kahta's *hilani*-like structures and the historical *hilanis* is related to the function of the main room. This room is a main hall/throne room in all of the historical *hilanis* and contains a hearth or other installation such as a dais or podium. In Kahta's *hilani*-like structures, however, this room, as described in detail above, is used for multiple purposes. In Type 1 and Type 2, it is the only broad room behind the portico and functions as a main room or a reception room, as in the historical *hilanis*. In the case of the two broad rooms running side by side behind the portico (*hayat*) (Type 3, Type 4), however, one of these rooms (generally the one on the west side) serves as a kitchen.

### An Essay on the Symbolism of Columned Porticos in the *Bit Hilani*

The frontal colonnaded porch entrance is an important part of the symbolism of these buildings and the columned portico, *hayat*, is their hallmark. In fact, according to most researchers, a *bit hilani* consists of only a columned portico. Even in local applications, it can be seen that the columned portico is an inevitable element. Could it be that the colonnaded porticos in the *bit hilanis* have a special meaning? At first glance, the columns appear to have a structural purpose. Like the rest of the structure, the portico has a wooden flat roof. Because the wood used cannot pass through the 5 to 6 m beam opening by itself, it is likely that the wooden columns provide the support. The load on the portico, which is one-third the length of the façade, is carried by the wooden crossbeams on the wooden columns instead of by thick walls. These wooden columns, which first arose from structural necessity, were later transformed into a figure that characterised the design of the structure.

In contrast to this seemingly rational view, the lavish decorations of the porticos and the presence at times of unusually large columns, in spite of the extreme narrowness of the portico, suggest that these columns were not just structural elements. The oldest concept of columns or pillars goes back to the tree and pillar symbols of the Sumerians, Akkadians, Babylonians, Assyrians, Hittites, Phoenicians, Persians, Egyptians and Greeks. Several examples of official buildings with rows of pillars have survived from the early periods of Egypt and Mesopotamia. Columns are the most characteristic feature of Achaemenid architecture as well. Archaeological evidence testifies to many temples with pairs of column bases outside their entrances in Syro-Mesopotamia and the region of Northern Israel. The "long-room plan" is thought to have derived from Syria in the second millennium BCE and was used in many temples which are entered through a portico formed by the extension of the temple's two side walls. Within each shallow portico stood two columns (Ain Dara temple, Solomon's temple, Hazor temples, Tell Tayinat Building II, et cetera).<sup>42</sup>

<sup>41</sup> Harrison, 2009, p. 178.

<sup>42</sup> Davey 1980, p. III.

The expression *bit halani* is believed to have derived from the Hittite word *hílammar*. *Hílammar* is a “gatehouse”, referring to the monumental entrance structure typically uncovered in Hittite temple plans.<sup>43</sup> The *hílammar*, or colonnaded portico, had a special importance for the Hittites. It was commonly associated with rituals, and more specifically with festivals. In Hittite architecture, the gate was the prominent locus of ritual performance. During the AN.TAH.SUM festival, for example, which took place in springtime and lasted 38 days, the Hittite king performed libations at the *hílammar* of a mountain temple precinct.<sup>44</sup> The KI.LAM festival is the most informative on the topography of Hattusa and its temples. The festival consisted of a series of processions to the gatehouses of various temples where festival performances took place. The *hílammar* of the palace where the king initiated the festival is the same as the “palace gate”, and thus implies an identification with one of the two entrances to the palace complex on Büyükkale.<sup>45</sup> The *hílammar* was also a location for animal sacrifices.<sup>45</sup>

Besides the Hittites, Sargon, in his description of his palaces, places a special emphasis on the entrances of the *bit hílanis* and boasts of the magnificence of the columns he uses, referring to their height and the materials from which they are made. Sargon asserts: “I established four cedar columns arranged in pairs, whose thickness amounted to one nindanu... firmly upon (those) mighty lions.”<sup>46</sup> In another text where he speaks of his palaces, Sargon explains that he erected beams of cedar and cypress in front of the gates in the *bit hílani* style: “Palaces of ivory, maple, boxwood, mulberry, cedar and cypress, juniper, pine and pistachio-wood I built therein and erected a *bit hílani*, patterned after a Hittite palace, in front of their gates, and beams of cedar and cypress I placed over them.”<sup>47</sup>

The concept of the “Tree of Life” (sacred Tree) is seen in Anatolia and all through the ancient East. The Tree of Life has a widespread symbolism and imagery in representational forms and motifs: on iconography, intaglioies, incised gems, cylinder seals and signets, either as cultic scenes, paintings and engravings, or conventionalised designs and patterns.<sup>48</sup> The Tree of Life was a basic symbol in all ancient Eastern myths and rituals. The first traces of the Tree of Life were encountered in Mesopotamia, dating back to the third millennium BCE. The plant motif between two animals is a symbol of the constant cycle of life and death and has been known since the Sumerians. About the middle of the second millennium, the Tree became an imperial symbol, the so-called Late Assyrian Tree in Mesopotamia.<sup>49</sup> With the rise of the Neo-Assyrian Empire, this form of the Tree spread throughout the entire Near East and continued to be seen down to the end of the first millennium. The Assyrian Tree is a symbol of central importance, at least in the context of the palace decoration of Assurnasirpal II (883–859 BCE) and Shalmaneser III (858–824 BCE) and Assyrian seals, and there can be no doubt that it influenced neighbouring cultures.<sup>50</sup> The throne room can be read as a statement of the establishment and maintenance of the exterior state

<sup>43</sup> Singer 1975, p. 71.

<sup>44</sup> Gilbert 2011, p. 118; see also Hawkins 1998, p. 69.

<sup>45</sup> Hawkins 1998, p. 70.

<sup>46</sup> Mouton and Rutherford 2010, p. 277.

<sup>47</sup> Frahm 2008, p. 15.

<sup>48</sup> James 1966, p. viii; Glynn 1994, p. 1; see also Frankfort 1952, p. 126.

<sup>49</sup> Parpola 1993, p. 163.

<sup>50</sup> Cooper 2000, p. 430.

through military conquest and tribute, and the maintenance of the internal state through cultic observances, achieved through the person of the all-powerful king.<sup>51</sup> The role of the sacred Tree is also an emblem of the provisioning of the land, and the role of the king in relation to it.<sup>52</sup> In such scenes the king is portrayed as the human personification of the Tree. Thus, the Tree symbolised the divine world order, and the king himself represented the realisation of that order in man; in other words, a true image of God.<sup>53</sup> Clearly the Tree here represents “the divine world order” maintained by the king as the representative of the god Ashur, embodied in the winged disk hovering above the Tree.<sup>54</sup> The Tree also represents the fertility and the divine principles represented by Ashur in the winged disk. The central symbol of the cult was the cosmic tree connecting heaven and earth, which contained the secret key to the psychic structure of the perfect man and thus to eternal life.<sup>55</sup>

The symbol of the Tree of Life appears on some seals used by the Hittites, sometimes as a decorative element or more widely as an element of worship. For the Hittites, the Tree is also the symbol of the kingdom. The mother-goddess and the weather-god, being the personifications of the reproductive forces of the nature, assumed their familiar roles in the Tree of Life theme, the goddess acquiring a solar status identifying her with the sun-god, the lord of heaven whose emblem was adopted by the Hittite kings.<sup>56</sup> All of the beliefs connected to the Tree of Life have been perhaps reflected in architecture in a stylised form in the wooden columns in front of *the bit bilanis*. The fact that the Tree of Life stands in front of a temple in many cult scenes in examples from both the Hittites and the Assyrians<sup>57</sup> seems to support this thought.

## Conclusion

Cultural values and traditions are what make societies survive. While these values and traditions represent the histories of societies on the one hand, on the other, they provide cultural continuity that can be passed on to future generations. The undeniable relationship between the past and the future, prevailing across the extent of time, exists in the field of architecture as well. We have witnessed that architectural forms — from concepts and practices with proved correctness and validity to general current waves taken as fashion — have been used and transferred to the future. Traditional housing architecture, which is one of the basic narratives of a culture, is one of the most important parameters reflecting the relationship between a region and its culture. It is for this reason that achieving cultural continuity is closely related to sustaining traditional forms of residential architecture. As a tool with which norms, traditions and values are communicated, traditional homes and surroundings contribute to the continuity of culture in future generations. Architecture is a phenomenon that renews itself continuously and by doing so, adds

<sup>51</sup> Winter 2009, p. 28.

<sup>52</sup> Winter 2009, p. 9.

<sup>53</sup> Parpola 1993, pp. 167–168.

<sup>54</sup> Winter 2009, p. 16.

<sup>55</sup> Winter 2009, p. 16.

<sup>56</sup> James 1966, p. 116.

<sup>57</sup> Çevik 1999, p. 336.



new experiences to what came before, sometimes referring to the past in the form of echoes. The term “architectural culture” can be defined as “architectural culture continuity”.

Kahta’s *hilani*-like structures occupy an important place within the concept of architectural continuity. Here, the most fundamental factor determining the style of the houses in the area is a historical factor and all the structures bear a strong affinity to the architectural tradition of the region. The plans have been adapted to the lifestyles and customs of the people. Even today, rural architecture in the region is built according to this type, but the construction technique is reinforced concrete. The continuity of the special character of the buildings in the villages, which exhibit a noticeably homogeneous societal structure, represents the memory of history in the region. These houses, rooted in history as the historical symbols of the region, make us acknowledge today that *bit hilani* is still alive with some local adaptations. These structures should be understood as a local heritage of historical *hilani* tradition.

## Bibliography

- Akkermans, P. M. M. G. and Schwartz, G. M.  
2004 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (c.16,000–300 BC)*. Cambridge: Cambridge University Press.
- Akın, G.  
1985 *Doğu ve Güneydoğu Anadolu’daki Tarihsel Ev Tiplerinde Anlam*. Unpublished PhD diss. Istanbul Technical University.
- Amiran, R. and Dunayevsky, I.  
1958 “The Assyrian open-court building and its Palestinian derivatives,” *Bulletin of the American Schools of Oriental Research* 149: 25–32.
- Arav, R. and Bennett, M.  
200 “The *bît hilāni* at Bethsaida: Its place in Aramaean/Neo-Hittite and Israelite palace architecture in the Iron Age II,” *Israel Exploration Journal* 50: 47–81.
- Barnett, R. D.  
1955 *Assyrian Palace Reliefs and their Influence on the Sculpture of Babylonia and Persia*. London: Batchworth Press.
- Bittel, K. and Naumann, R.  
1938 *Boğazköy*. Vol. 2. *Neue Untersuchungen Hethitischen Architektur* (Abhandlungen der Preussischen Akademie der Wissenschaften, Philosophisch-historische Klasse 1938, no. 1). Berlin: Akademie der Wissenschaften.
- Bonfil, R. and Zarzecki-Peleg, A.  
2007 “The palace in the upper city of Hazor as an expression of a Syrian paradigm,” *Bulletin of the American Schools of Oriental Research* 348: 25–47.
- Bossert, H. T.  
1933 “*Bît hilani* — des Rätsels Lösung?,” *Archiv für Orientforschung* 9: 127.  
1961 “*Bît hilani* und anderes,” *Orientalia* n.s. 30: 199–202.

- Börker-Klahn, J.  
1980 "Der bit hilani im bit sahuri des Assur-Tempels," *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 70: 258–273.
- Bryce, T.  
2009 *The Routledge Handbook of the Peoples and Places of Ancient Western Asia: The Near East from the Early Bronze Age to the Fall of the Persian Empire*. New York: Routledge.  
2012 *The World of the Neo-Hittite Kingdoms: A Political and Military History*. Oxford: Oxford University Press.
- Cooper, J.  
2000 "Assyrian prophecies, the Assyrian Tree, and the Mesopotamian origins of Jewish monotheism, Greek philosophy, Christian theology, Gnosticism, and much more," in *Journal of the American Oriental Society* 120: 430–444.
- Curl, J. S.  
1991 *The Art and Architecture of Freemasonry: An Introductory Study*. Scotland: B. T. Batsford Ltd.
- Çevik, N.  
1999 "Hayat Ağacının Urartu kült törenlerindeki yeri ve kullanım biçimi," *Anadolu Araştırmaları* 15: 335–367.
- Davey, C. J.  
1980 "Temples of the Levant and the Buildings of Solomon," *Tyndale Bulletin* 31: 107–146.
- Demir, E.  
2004 "Establishment, development and current functional characteristics of Kahta," *Gazi Eğitim Fakültesi Dergisi* 24, no. 1: 227–247.
- Dörner, F. K. and Naumann, R.  
1939 *Forschungen in Kommagene* (Istanbuler Forschungen 10). Berlin: Dt. Archäologisches Inst.
- Dörner, F. K. and Goel, T.  
1963 *Arsameia am Nymphaios* (Istanbuler Forschungen, Bd. 23, Bd. 33). Berlin: Gebr. Mann.
- Erdim, M. M.  
1980 *Anadolu'da Geleneksel Konut Birimi*. Unpublished PhD diss. Izmir: Ege Üniversitesi.
- Frahm, E.  
1998 "Sanherib und die Tempel von Kuyunjik," in *Festschrift für Rykle Borger zu seinem 65. Geburtstag am 24. Mai 1994* (Cuneiform Monographs 10), edited by S. M. Maul, pp. 107–121. Groningen: Styx.  
2008 "The great city: Nineveh in the age of Sennacherib," *The Canadian Society for Mesopotamian Studies* 3: 13–20.
- Frankfort, H.  
1952 "The Origin of the 'bit hilani'," *Iraq* 14: 120–131.  
1956 *The Art and Architecture of the Ancient Orient*. Harmondsworth: Penguin Books.
- French, D. H.  
1983 "New research on the Euphrates frontier," in *Armies and Frontiers in Roman and Byzantine Anatolia: Proceedings of a colloquium held at University College Swansea, April 1981* (British Institute of Archaeology at Ankara Monograph 5; BAR International Series 156), edited by S. Mitchell, pp. 71–101. Oxford: BAR.

- Fritz, V.  
1983 "Die Syrische Bauform des Hilani und die Frage seiner Verbreitung," *Damaszener Mitteilungen* 1: 43–58.
- Gilbert, A.  
2011 *Syro-Hittite Monumental Art and the Archaeology of Performance, The Stone Reliefs at Carchemish and Zincirli in the Earlier First Millennium BCE*. New York: Walter de Gruyter.
- Giovino, M.  
2007 *The Assyrian Sacred Tree: A History of Interpretations*. Fribourg: Academic Press.
- Gitin, S.  
1997 "The Neo-Assyrian empire and its western periphery: The Levant, with a focus on Philistine Ekron," in *Assyria 1995: Proceedings of the 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project*, edited by S. Parpola and R. M. Whiting, pp. 77–103. Helsinki: Neo-Assyrian Text Corpus Project.
- Glynn, M. L.  
1994 *An Analysis of the Palace of Sargon II At Khorsabad: Its Organisation and Function*. Unpublished Masters diss. University of Melbourne.
- Gurney, O. R.  
1954 *The Hittites*, 2nd ed. Harmondsworth: Pelican.
- Güterbock, H. G.  
1972 "Hilammar," in *Reallexikon der Assyriologie und Vorderasiatischen Archäologie*, Vol. 4, edited by D. O. Edzard, pp. 404–405. Berlin; New York: W. de Gruyter.
- Haines, R. C.  
1971 *Excavations in the Plain of Antioch*. Vol. 2. *The Structural Remains of the Later Phases* (Oriental Institute Publications 95). Chicago: University of Chicago Press.
- Halpern, B.  
1996 *The First Historians: The Hebrew Bible and History*. San Francisco: Harper & Row.
- Harrison, T. M.  
2007 "The Late Bronze/Early Iron Age transition in the North Orontes Valley," in *Societies in Transition: Evolutionary Processes in the Northern Levant Between Late Bronze Age II And Early Iron Age: Papers Presented on the Occasion of the 20th Anniversary of the New Excavations in Tell Afis: Bologna, 15th November 2007*, edited by F. Venturi, pp. 83–103. Bologna: CLUEB.  
2009 "Neo-Hittites in the 'Land of Palistin': Renewed investigations at Tell Ta'yinat on the Plain of Antioch," *Near Eastern Archaeology* 72: 174–189.
- Harrison, T. P. and Osborne, J. F.  
2012 "Building XVI and the Neo-Assyrian sacred precinct at Tell Tayinat," *Journal of Cuneiform Studies* 64: 125–143.
- Hawkins, J. D.  
1998 "A thousand gods of the Hattusa: Home to the thousand gods of Hatti," in *Capital Cities: Urban Planning and Spiritual Dimensions*, edited by J. G. Westenholz, pp. 65–81. Jerusalem: Bible Land Museum, Jerusalem.  
2000 *Corpus of Hieroglyphic Luwian Inscriptions*. Vol. 1. *Inscriptions of the Iron Age*, pt. 1. Berlin: Walter de Gruyter.

- Herzfeld, E.  
1909 "Eine Reise durch das westliche Kilikien im Frühjahr 1907," *Petermann's Mitteilungen aus Justus Perthes' Geographischer Anstalt* 55: 25–34.
- James, E. O.  
1966 *The Tree of Life: An Archaeological Study*. Leiden: Brill.
- Karadoğan, S.  
2005 *Adıyaman Havzasının Genel ve Uygulamalı Jeomorfolojisi*. Unpublished PhD diss. Fırat University, Elazığ.
- Klinhott, M.  
1978 "Megaron und Bit Hilani", in *Wohnungsbau im Altertum* (Diskussionen zur Archäologischen Bauforschung 3), pp. 63–77. Berlin: Deutsches Archäologisches Institut.
- Lehmann, G. and Kilebrew, A. E.  
2010 "Palace 6000 at Megiddo in context: Iron Age central hall tetra-partite residencies and the *Bit-Hilāni* building tradition in the Levant," *Bulletin of the American Schools of Oriental Research* 359: 13–33.
- Luschan, F. V., Humann, C. and Koldewey, R.  
1898 *Ausgrabungen in Sendschirli*. Vol. 2. *Ausgrabungsbericht und Architektur* (Königliche Museen zu Berlin; Mittheilungen aus den orientalischen Sammlungen 12). Berlin: Spemann.
- Margueron, J. C.  
1979 "Un 'hilani' a Emar," in *Archaeological Reports from the Tabqa Dam Project: Euphrates Valley, Syria* (Annual of the American Schools of Oriental Research 44), edited by D. N. Freedman, pp. 153–176. Cambridge, MA: ASOR.  
1987 "Les palais syriens a l'âge du bronze," in *Le Système Palatial en Orient, en Grèce et à Rome. Actes du Colloque de Strasbourg, 19–22 Juin 1985* (Travaux du Centre de Recherche sur le Proche-Orient et la Grèce Antiques 9), edited by E. Lévy, pp. 251–261, Strasbourg: E. J. Brill.
- Meissner, B.  
1942 "Das bit hilani in Assyrien," *Orientalia* n.s. 11: 251–261.
- Meissner, B. and Opitz, D.  
1940 *Studien zum Bit Hilāni im Nordpalast Assurbanaplīs zu Ninive* (Abhandlungen der Preussischen Akademie der Wissenschaften, Philologisch-historische Klasse 1939, no. 18). Berlin: de Gruyter.
- Monamy, E. M. A.  
2010 "Le bit-hilani existe-t-il encore? Une approche ethnoarchéologique," in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East, 5 May–10 May 2009*, edited by P. Matthiae, F. Pinnock, L. Nigro and N. Marchetti, pp. 457–465. Wiesbaden: Harrassowitz.
- Moortgat, A.  
1955 *Tell Halaf III: Die Bildwerke*. Berlin: Walter de Gruyter & Co.
- Mouton, A. and Rutherford, I.  
2010 "The sun deity of the *hīlammar*: An unnoticed 'pan-Luwian' deity?," *Bibliotheca Orientalis* 62, no. 3–4: 275–282.
- Naumann, R.  
1979 "Das hethitische hīlammar," *Türk Tarih Kongresi* 8: 227–232.  
1991 *Eski Anadolu Mimarlığı*. Ankara: Türk Tarih Kurumu Yayınları.

Niehr, H.

- 2004 "Auswirkungen der späthethitischen Kultur auf die Religion der Aramäer in Südanatolien und Nordsyrien," in *Die Außenwirkung des späthethitischen Kulturraums. Tagungsberichte der 2. Forschungstagung des Graduiertenkollegs 'Anatolien und seine Nachbarn' der Universität Tübingen* (Alter Orient und Altes Testament 323), edited by M. Novák, F. Prayon and A.- M. Wittke, pp. 405–424. Münster: Ugarit-Verlag.

Neve, P.

- 1982 *Büyükkale, die Bauwerke Grabungen 1954–1966*. Berlin: Gebr. Mann.

Novák, M.

- 2004 "Hilani und Lustgarten: Ein 'Palast des Hethiter-Landes' und ein Garten nach dem Abbild des Amanus," in *Die Aussenwirkung des späthethitischen Kulturraumes: Gütertausch, Kulturkontakt, Kulturtransfer: Akten der zweiten Forschungstagung des Graduiertenkollegs 'Anatolien und seine Nachbarn' der Eberhard-Karls-Universität Tübingen (20. bis 22. November 2003)* 3 (Alter Orient und Altes Testament 323), edited by M. Novák, F. Prayon and A. M. Wittke, pp. 335–372. Münster: Ugarit-Verlag.

Oelmann, F.

- 1922 "Hilani und Liwanhaus," *Bonner Jahrbücher* 127: 189–236.

Oppenheim, M. F.

- 1950 *Tell Halaf II: Die Bauwerke*. Berlin: W. de Gruyter.

Orthmann, W.

- 2001 "Die Ausgrabung am Tell Halaf. Architektur und Bildwerk," in *Faszination Orient. Max von Oppenheim, Forscher, Sammler, Diplomat*, edited by G. Teichmann, and G. Völger, pp. 204–247. Cologne: DuMont.
- 2002 *Die Aramaisch-Assyrische Stadt Guzana: Ein Rückblick auf die Ausgrabungen Max Freiherr von Oppenheims in Tell Halaf*. Saarbrücken: Druckerei und Verlag.

Osborne, J. F.

- 2012 "Communicating power in the *bit-hilāni* palace," *Bulletin of the American Schools of Oriental Research* 368: 29–66.

Parpola, S.

- 1993 "The Assyrian tree of life: Tracing the origins of Jewish monotheism and Greek philosophy," *Journal of Near Eastern Studies* 52: 161–202.

Pucci, M.

- 2008 *Functional Analysis of Space in Syro-Hittite Architecture* (BAR International Series 1738). Oxford: Archaeopress.

Puchstein, O.

- 1892 "Die Säule in der assyrischen Architektur," *Jahrbuch des Kaiserlich Deutschen Archäologischen Instituts* 7: 1–24.

Reade, J.

- 2011 "The evolution of Assyrian imperial architecture: Political implications and uncertainties," *Mesopotamia* 46: 109–123.

Reich, R.

- 1992 "Palaces and Residencies in the Iron Age," in *The Architecture of Ancient Israel: From the Prehistoric to the Persian Periods*, edited by A. Kempinski and R. Reich, pp. 202–222. Jerusalem: Israel Exploration Society.

- Renger, J. and Hrouda, B.  
 1972 "Hilāni, bīt: A. Nach Neuassyrischen Inschriftlichen Zeugnissen. B. Archäologisch," in *Reallexikon der Assyriologie und Vorderasiatischen Archäologie*, Vol. 4, edited by D. O. Edzard, pp. 405–409. Berlin: de Gruyter.
- Russell, J. M.  
 1991 *Sennacherib's Palace Without Rival at Nineveh*. Chicago: The University of Chicago Press.
- Russell, J. M.  
 1998 "The program of the Palace of Assurnasirpal II at Nimrud: Issues in the research and presentation of Assyrian art," *American Journal of Archeology* 102: 655–715.  
 1999 *The Writing on the Wall: Studies in the Architectural Context of Late Assyrian Palace Inscriptions*. Winona Lake, Ind.: Eisenbrauns.
- Sader, H.  
 1987 *Les états araméens de Syrie depuis leur fondation jusqu'à leur transformation en provinces assyriennes* (Beiruter Texte und Studien, Bd. 36). Beirut: Orient Institut der Deutschen Morgenländischen Gesellschaft.
- Schwartz, G.  
 1989 "The origins of the Arameans in Syria and Northern Mesopotamia: Research problems and potential strategies," in *To the Euphrates and Beyond: Archaeological Studies in Honour of M. van Loon*, edited by O. M. C. Haex, H. H. Curvers and P. M. M. G. Akkermans, pp. 275–291. Rotterdam: A. A. Balkema.
- Sharon, I. and Zarzecki-Peleg, A.  
 2006 "Podium Structures with lateral access: Authority ploys in royal architecture in the Iron Age Levant," in *Confronting the Past: Archaeological and Historical Essays on Ancient Israel in Honor of William G. Dever*, edited by S. Gitin, J. E. Wright and J. P. Dessel, pp. 145–167. Winona Lake, Ind.: Eisenbrauns.
- Sevin, V.  
 1991 *Yeni Assur Sanatı I Mimarlık*. Ankara: Türk Tarih Kurumu Basımevi.
- Singer, I.  
 1975 "Hittite *hīlammār* and hieroglyphic Luwian *hīlāna*," *Zeitschrift für Archäologie* 65: 69–103.
- Summers, G. D.  
 1993 *Tille Höyük 4: The Late Bronze Age and the Iron Age Transition* (Monograph, British Institute of Archaeology at Ankara 15). Ankara: British Institute of Archaeology at Ankara.
- Stern, E.  
 2001 *Archaeology of the Land of the Bible*. Vol. 2. *The Assyrian, Babylonian and Persian Periods (722–332 B.C.E)*. New York: Doubleday.
- Turner, G.  
 1970 "The state apartments of late Assyrian palaces," *Iraq* 32: 177–213.
- Ussishkin, D.  
 1973 "King Solomon's Palaces," *Biblical Archaeologist* 36: 78–105.
- Wachsmuth, F.  
 1958 "Was ist ein 'Hilani', was ein 'bīt hīlāni'?", *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 108: 66–73.



Wagner, J.

- 1983 "Dynastie und Herrscherkult in Kommagene. Forschungsgeschichte und neue Funde," *Istanbuler Mitteilungen* 33: 177–224.

Weidhaas, K.

- 1939 "Der Bit Hilani," *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 45: 108–168.

Weiskopf, M.

- 1992 "Commagene," *Encyclopaedia Iranica*, Vol. VI, Fasc. 1: 54–57.

Winter, I. J.

- 1982 "Art as evidence for interaction: Relations between the Assyrian empire and North Syria," in *Mesopotamien und seine Nachbarn I*, edited by H. J. Nissen and J. Renger, pp. 355–382. Berlin: D. Reimer.  
2009 *On Art in the Ancient Near East*. Vol. 1. *Of the First Millennium B.C.E.* (Culture and History of the Ancient Near East). Leiden: Brill.

Wright, G. R. H.

- 1985 *Ancient Building in South Syria and Palestine*. Leiden: Brill.

Woolley, L.

- 1955 *Alalakh: An Account of the Excavations at Tell Atchana in Hatay, 1937–1949* (Reports of the Research Committee of the Society of Antiquaries of London 18). London: Society of Antiquaries.  
1962 *Mesopotamien und Vorderasien: Die Kunst des Mittleren Ostens*. Baden-Baden: Holle.

Zarzecki-Peleg, A.

- 2005 "Trajectories of Iron Age settlement in North Israel and their implications for chronology," in *The Bible and Radiocarbon Dating: Archaeology, Text and Science*, edited by T. E. Levy and T. Higham, pp. 367–378. London: Equinox Publishing.

Alev ERARSLAN  
Istanbul Aydın University,  
Department of Architecture,  
aleverarslan@gmail.com

# Contested and Common Ground

## Geography and History at the Limits of the Early Islamic Conquests

Abby ROBINSON

### Abstract

*In the historiography of the early Islamic conquests (here, mainly 632–656), mountains, rivers, and places characterised by extremes of nature, such as severe heat or cold, represent straightforward physical barriers against armies but also have two kinds of symbolic significance. First, they were the settings for stories — plausibly crafted to inspire or galvanise audiences — about prevailing over even the toughest opponents. Second, they were contexts within which complex political and ideological issues relating to the conquests were explored by authors. A pattern emerges wherein among the Christian histories more symbolic spaces belong to the first category than the second, whereas in the Arabic texts the reverse applies. This distinction reflects the divergent perspectives of defenders and conquerors, but also reveals the contrasting positions of Christian and Muslim authors relative in time and space to the events they describe. On the other hand, there is also much shared ground in how spaces are depicted across the Arabic and Christian accounts. The outlooks of people on opposing sides had perhaps a surprising amount in common. A unified study of representations of space in the source material for the conquests ultimately provides a more comprehensive understanding of what occurred at this major turning point in world history.\**

### Introduction

The early Islamic conquests were swift and sweeping, dislodging long-established Roman and Persian powers with an ease that was previously unimaginable. “The armies of Ismael,” writes the Armenian historian Sebeos, “were unexpectedly stirred and in a moment of time defeated the power of the two kings.”<sup>1</sup> In little more than 20 years from 632, Palestine and Syria, Mesopotamia, Iraq, Egypt, parts of Caucasias and the countries of the Iranian Plateau all came under various degrees of Muslim control. But despite the invaders’ spectacular momentum, they were not unstoppable. In the historiography of the conquests, three types of location in the natural world regularly appear as limits to their progress: mountains, rivers and places characterised by forces of nature, such as extreme heat or cold, floods, storms or earthquakes. It comes as no surprise that mountain chains such as the Taurus, Caucasus and Elburz were sometimes impassable, that generals paused at the Euphrates, Tigris and Nile Rivers, or that armies were forced to turn back in the face of

\* I would like to thank Professors Chris Mackie and Tony Sagona, Associate Professor Roger Scott, and my friends and colleagues at the British Institute at Ankara — particularly the director, Dr Lutgarde Vandeput — for their suggestions and support throughout the duration of my project.

<sup>1</sup> *Sebeos* I, p. 279.

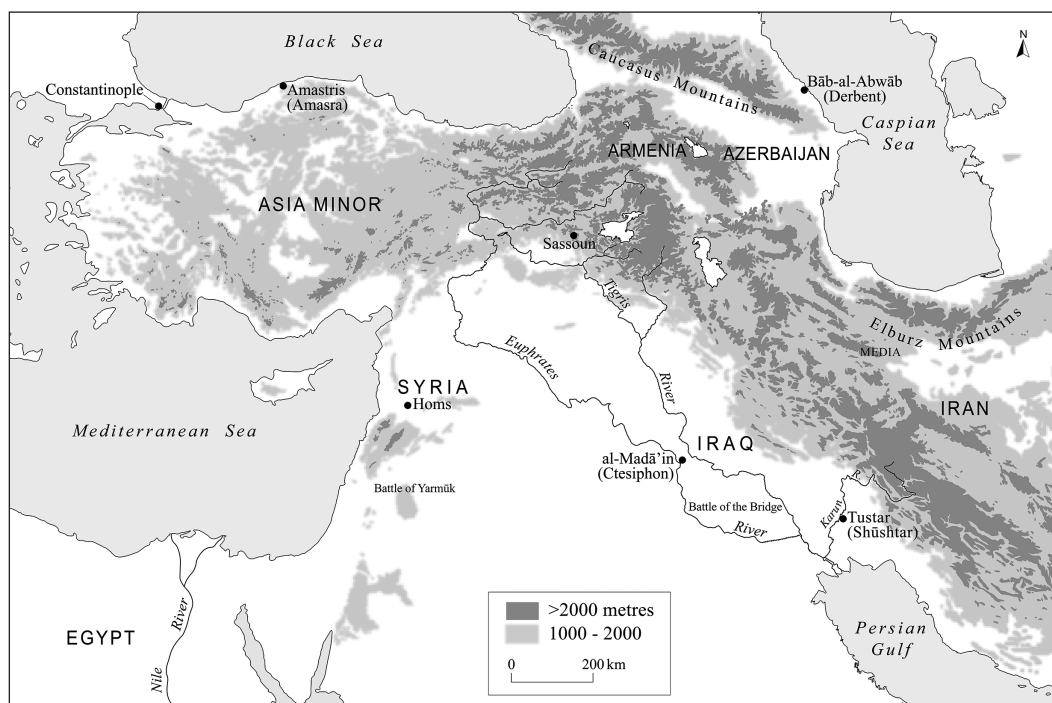


Fig. 1. Map of key locations mentioned in the text (created by Chandra Jayasuriya).

an unusually harsh Caucasian winter or massive storm at sea. But these natural phenomena were more than just physical barriers. In the narratives of the conquests, they also represent limits of a more ideated kind (Fig. 1).<sup>2</sup>

It is a case of what Dozeman, in his article on geography and historiography of the ancient trans-Euphrates region, calls “territory... exceed[ing] its literal representation.”<sup>3</sup> To explore this fact, like Dozeman I will take categories devised by Henri LeFebvre to comprehend modern social (or “produced”) spaces and apply them to descriptions of locations in historiographical source material.<sup>4</sup> The three types of space identified by LeFebvre are: “perceived”, which is in the realm of the physical and sensory; “conceived”, which is the product of intellect, external perspectives and ideological positions; and “lived”, which is shaped by imagination or emotion, an outcome and determinant of the worldviews of author, actors and audience.<sup>5</sup> The purpose of employing this model is not to privilege one type of interpretation over the others, but to recognise how identifying “the interweaving of physical and historical geography with social and

<sup>2</sup> For a discussion and definitions of the term “ideational” in the context of landscape studies, see Knapp and Ashmore (1999, pp. 12–13). Put simply, it might be understood as “concerned with ideas.”

<sup>3</sup> Dozeman 2003, p. 451.

<sup>4</sup> Dozeman 2003, p. 455.

<sup>5</sup> LeFebvre 1991, pp. 33, 40; Dozeman 2003, pp. 455–456.

ideological representations” in ancient historiography will enable the events the texts describe to be more fully understood.<sup>6</sup>

Here, I have taken “perceived” space to be represented by descriptions of physical obstacles in the landscape; that is, geography as barrier. Next, if portrayals of “lived” space in the historiography of the early conquests reveal mountains, rivers and places characterised by extreme climate or forces of nature to be scenes of resolution, where inspirational protagonists actively hold or extend boundaries, a third type of depiction might be considered “conceived” space. Places of this kind are associated with socio-political themes and may have been shaped by the intellectual positions of authors looking back on events at some remove in time or with agendas to promote.<sup>7</sup> To interpret them in such a way can cast light on some of the more complex issues associated with the conquests, as will be seen below.

In summary, I will discuss the significance in the Islamic and Christian historiography of mountains, rivers and locations primarily characterised by forces of nature. I will argue that these places were sometimes physical barriers, “perceived” space, but they also had two kinds of more abstract meaning. First, they could be the setting, in “lived” space, for stories, plausibly crafted to inspire and galvanise audiences, about prevailing against significant opponents. Second, they might have import as the context, in “conceived” space, within which complex issues related to the politics and conduct of the conquests were examined and explained. Finally, I will observe that the Christian histories of the conquests feature more representations of “lived” than “conceived” space, while the reverse is true of the Muslim histories. This difference reflects the divergent attitudes of defenders and invaders, but also the contrasting positions of Christian and Muslim authors relative to the events they describe. Nevertheless, there is much common ground in how the three meanings are conveyed across the two traditions. The worldviews of those on opposing sides share more than might be expected.

### *Source Material*

Most, but not all, of the events which will be treated here occurred between 632 and 656, the period which incorporated the first great wave of Islamic expansion. I draw extensively on the work of the Muslim historians Baladhurī (d. ca. 892) and Tabarī (d. 923); however, it is widely acknowledged that their use as sources of factual information about the past is fraught with difficulties. The histories are “complex mosaic[s]” of stories from multiple sources, each story ostensibly passed down from a first-hand witness via a chain of transmitters. Most of the collections of stories upon which the histories are based were compiled some time after the events those stories describe, in the late eighth or early ninth centuries.<sup>8</sup> Commentators agree that the content was manipulated to suit the concerns of the publishers’ own times — the consolidation of the new Islamic religion,<sup>9</sup> or the claim to personal financial benefit or prestige associated with a claim

<sup>6</sup> LeFebvre 1991, *passim*, e.g., pp. 94, 226, 369–370; Dozeman 2003, p. 456.

<sup>7</sup> Sebeos II (commentary), p. 236; Whittow 1996, pp. 84–85.

<sup>8</sup> See Hoyland 1997, pp. 37–38; Kennedy 2007, pp. 16–17; Bosworth 2013, [referenceworks.brillonline.com/entries/encyclopedia-of-islam-2/al-tabari-COM\\_1133](http://referenceworks.brillonline.com/entries/encyclopedia-of-islam-2/al-tabari-COM_1133); P. Hitti’s introduction to *Baladhurī* I, pp. 2–4; Sebeos II (commentary), p. 235; R. S. Humphries 1990 (in his foreword to *Tabarī* 15, pp. xiv–xv).

<sup>9</sup> Whittow 1996, pp. 84–85.

of deeds by one's ancestors<sup>10</sup> — and this was at the cost of factual detail about chronology, locations and tactics. Thus, a great deal of discussion about Islamic historiography revolves around problems with fixing the order of events and other matters of fact. My emphasis, however, is on identifying patterns of representation and meaning in the source material rather than providing a reconstruction of events. Furthermore, the focus is greater on the settings of stories than on how they relate to each other within a linear narrative of the conquests, or how they transition one into the next. It is possible to see “the units of the narrative... as juxtaposed in space, not unrolling in time.”<sup>11</sup>

The record produced by Christian authors also presents challenges.<sup>12</sup> Formal, official histories of empire in the style of earlier writers such as Procopius are absent in the seventh century. But by means of what has been called a “broadening of perspective,” a great deal of source material for the conquests can be found.<sup>13</sup> Saints' *Lives* and *Miracles* offer insights if they are looked at, again, for patterns and themes as much as for specific detail.<sup>14</sup> Furthermore, the production of histories and chronicles carried on in regions away from the centre of the Byzantine empire: West Syrian chronicles cover parts of the seventh century, and the *Chronicle* of John of Nikiu is a near-contemporary (though incomplete) record of the conquest of Egypt. The location of the Armenian historians Sebeos and Łewond on the periphery of empires enhances their focus on the frontiers and lends their narratives great immediacy and colour.

The approach taken to the source material here emphasises patterns and place ahead of chronology. It thus supports the use of texts which have sometimes been considered too unreliable as sources of information about the past. It also reveals common ground in the way defenders and invaders saw the world of the conquests, while at the same time clarifying the points of difference. Such a study of representations of space in the historiography of the early Islamic conquests leads ultimately to a more comprehensive understanding of this major turning point in world history.

## Mountains

The formidable peaks of Iran, Caucasia, Asia Minor and elsewhere were at times solid obstacles to the progress of Muslim armies.<sup>15</sup> Defenders found refuge in both the mountainous terrain and the qualities of its inhabitants, who used their local knowledge to repel invading forces by means of attack or negotiation. In the Christian texts, the almost symbiotic nature of the highlanders' relationship with the land is emphasised. The Arabic accounts, on the other hand, stress the possibility of the dominance of man over nature in the mountains. I will argue that in this contrast it is possible to see the divergent perspectives of defender and aggressor, but also authorial intent.

<sup>10</sup> Kennedy 2007, p. 15; *Sebeos* II (commentary), p. 236; Robinson (2004, p. 37) who observes, “the transmission of historical memory... was anything but disinterested.”

<sup>11</sup> Smitten 1981, p. 17.

<sup>12</sup> Although the opponents of the Muslim armies were of course not all Christian, it was Christians who produced the greater part of the extant record from the opposite side of the frontier.

<sup>13</sup> Cameron 1999, pp. 81, 84–85, 91 and *passim*.

<sup>14</sup> Patlagean 1983, *passim*, especially pp. 108–109, 112.

<sup>15</sup> Kennedy notes, in fact, (2007, p. 317) that “the 1,000-metre contour line represented the limit of the territory held by the Muslims” in both Spain and parts of the Middle East.

It may be that the defenders' stories were meant to reassure and inspire populations still under threat, those of the invaders to support the concept and realities of a new Islamic empire.

*The Christian Sources: Mountains as Safe Haven*

In 654, a Muslim army was routed in the highlands of Media in northwest Iran.<sup>16</sup> The Muslims had previously won the support of the Median army through diplomatic efforts and the Medes had been key allies against the last Sasanian king, Yazdagird III. But once the Persians were finally defeated — in Iran in 652 — and Yazdagird assassinated, the Arabs became less accommodating of the Medes. In turn, the Medes rebelled.<sup>17</sup> When the Muslims moved to crush them, the Medes joined forces with the inhabitants of the nearby alpine regions of Delum and Gelum (who always remained effectively “outside Muslim control”<sup>18</sup>) and “made their refuge and retreat the fastnesses of the land of Media, the deep forested valleys, the precipices, the rocks, the rugged, difficult terrain... and the mountain range of Media.”<sup>19</sup>

Pursuing them there, the Muslim soldiers were defeated by both the landscape itself and the archers it concealed: “Many had perished in the rough terrain and deep valleys by falling down from precipices, while many had been wounded by arrows in the impenetrable fens by the valiant and brave warriors.”<sup>20</sup> Forced to abandon their attempt to re-establish themselves in the region, the Muslim armies then proceeded north alongside the Caspian Sea, looking perhaps for a decisive military victory to restore their damaged pride and reputation. They reached a pass through the Caucasus Mountains but were stopped first by a small local garrison and then by a larger force of nomads, probably Khazars from the South Russian steppes.<sup>21</sup> As they tried to retreat, their opponents blocked the way, forcing those who survived the encounter to flee into the mountains. There the Muslim soldiers were overwhelmed again by conditions, with few surviving the terrible journey to return home, “naked and unshod, on foot and wounded.”<sup>22</sup> These mountains, like the Median ones before them, had proved impassable.

This story from Sebeos exemplifies how groups who were familiar with mountainous terrain could employ it against those who were not, in effect staging a “defence by offence.”<sup>23</sup> Local knowledge of these landscapes also contributed to how people developed and strengthened their built defences on the frontiers. Those structures combined manmade features with natural ones. The fringes of the Byzantine empire were comprised of “mountains, castles... fortresses... cave dwellings and villages dug out of the rock or buried under the earth.”<sup>24</sup> Sebeos even conflates the built with the natural in the language he uses. His translator notes that the historian's word *amur* means “fortress” when used as a noun, but as an adjective can be applied equally to a building

<sup>16</sup> Sebeos I, p. 147.

<sup>17</sup> Sebeos II (commentary), p. 277.

<sup>18</sup> Kennedy 2007, p. 179.

<sup>19</sup> Sebeos I, p. 147; II (commentary), p. 277.

<sup>20</sup> Sebeos I, p. 148.

<sup>21</sup> Sebeos I, pp. 148–149; II (commentary), p. 277.

<sup>22</sup> Sebeos I, p. 149.

<sup>23</sup> A phrase used by Ramsay (1923, p. 282) in a different context in Asia Minor. See the story of Maskala b. Hubaira in *Baladhuri* II, p. 40 for another example.

<sup>24</sup> Ibn Hauqal 1964, p. 194; also referred to in Haldon and Kennedy 1980, p. 97.



or a mountain range simply in order to convey its inaccessible nature: "It is not always clear whether a fortress or a region is intended."<sup>25</sup>

In a further extension of this idea, it is not unusual for people and places in Christian source material to be made virtually interchangeable. The range of contexts for representations of this type suggest it was an established part of the authors' worldviews. It is reflected in how they select, interpret and create their material. Sebeos chooses biblical images from the natural world to stand in for people; more than once he refers to Christians as trees, as Thomson remarks, while incoming armies are the "mortal hot wind which burned them."<sup>26</sup> He also construes a passage from Deuteronomy about the wrath of God destroying mountains as a direct reference to the downfall of the "tyrannies of great princes."<sup>27</sup> Lewond connects people and landscape as well when he describes crushing reprisals against the Armenians by Arab governor Muhammad b. Merwan, after which, "the inhabitants of our country... were left as smoldering remains of fire and as sheaves ground under the feet of pigs."<sup>28</sup> In the Syrian chronicle of Dionysius, "the Arabs pursued the Romans, like harvesters scything a ripe field of corn."<sup>29</sup>

In the same vein, Sebeos characterises the Median highlanders as somehow inseparable from their physical context. The Medes sought shelter not only in the mountains, but also "in the strength of those active and intrepid peoples who inhabited them."<sup>30</sup> The Muslims were vanquished by "those who dwelt in inaccessible places."<sup>31</sup> In a more literary milieu, a passage from a story of the Armenian folk hero David of Sassoun includes instances of the same sort of synthesis. Here it is between the fighters of Sassoun and their Armenian highland setting. Having been defeated and driven away by David, a Muslim general is vilified by his countrywomen: "You loud-mouthed runaway, / Down what dales and over what mountains have you fled, / Your thick head cleft in half?" "Silence you brats," he retorts,

You've seen only your breed  
Of men and not the madcap Sassoun braves.  
Sassoun's madcap braves are mountain-like,  
Their arrows thick as stakes, and their country  
Withal a stony fastness: canyon-walls, impenetrable, abound and deep  
hollows...  
Even their blades of grass stand curved as swords...<sup>32</sup>

The mountain men the poet describes are at one with the landscape's unassailable nature and as such they are extraordinary defenders of their ground.

In the Christian sources mountains therefore represent limits to the progress of Muslim armies both in a physical sense and in the more abstract ways they stand for security — even victory

<sup>25</sup> *Sebeos* I, p. 34 and n. 222.

<sup>26</sup> *Sebeos* I, p. 132 and n. 820, which also refers to p. 76.

<sup>27</sup> *Sebeos* I, p. 152.

<sup>28</sup> *Lewond*, p. 59.

<sup>29</sup> "Dionysius reconstituted," in Various 1993, p. 146.

<sup>30</sup> *Sebeos* I, p. 147.

<sup>31</sup> Thomson (*Sebeos* I, p. 148 n. 908), explains that the word *amrabnak* for "mountain dwellers" can equally be translated this way.

<sup>32</sup> *David of Sassoun*, p. 90. In general, regarding the particular relevance of the poem here, Tolegian (in his introduction, p. 3) establishes that, "the cycle of David is definitely representative of the Arab invasions of Armenia 632–852 AD."

against the odds. Mountains provide cover and safe remove from attackers. They are also the domain of the people's best defenders from amongst their peers, men (and women?) whose established relationship to their terrain makes them invincible, as opposed to heroic strangers who ride in from elsewhere to save the day. In this context, the mountains plausibly represent "lived" space, places of emotional significance and intense personal experience.

*The Arabic Sources: Claiming Space*

It is important to consider to what extent the texts by Muslim authors shared these ideas about mountains. They certainly contain material about the roles that mountains and mountain-dwellers played in campaigns, but concepts like those discussed above are not as strong. The Arabic histories are noticeably more prosaic in their descriptions of alpine landscapes: "Jibal Sharwin... is a very difficult mountain and hard to cross, having many jungles and swamps."<sup>33</sup> The differences in tone between the Christian and Arabic sources may be significant for what they reveal about authorial intent. Where Christian authors, close in time and space to what they portrayed, set inspirational scenes in the mountains, their Muslim counterparts have them as the backdrop to demonstrations of purpose by the invaders. In the latter representations there are arguably glimpses of the priorities of the eighth- to tenth-century authors, focussed at that later stage on occupation as well as expansion.

Muslim authors convey a consciousness of mountain ranges as solid and potentially insurmountable obstacles and spaces to be negotiated rather than taken. For example, in *Baladhurī*, on the Arab-Byzantine frontier in the Amanus (Nur) Mountains, the Muslim governor, Ḥabīb b. Maslama, negotiates terms favourable to the local people, the Jarājima, since only in that way could the invaders extend their influence across the frontier. They would pay no tribute and would keep any booty they won from the Greeks if they would only "act as helpers to the Moslems, and as spies and frontier garrison." Regardless, the Jarājima, apparently feeling themselves to be in a strong position, "on certain occasions... acted properly with respect to the [Moslem] governors; but on others... deviated from the right path and held friendly communications with the Greeks."<sup>34</sup>

Nevertheless, regarding the physical obstacles they encountered in the mountains, it can be argued from the source material that the Muslims — authors and protagonists alike — were more impressed by manmade fortifications than natural barriers. When tenth-century geographer Muqaddasī admires the defences of towns in his survey of the Islamic domain, his emphasis is on their well-maintained walls, fortresses, moats and, in particular, gates, rather than on the surrounding terrain. Even on the mountainous limits themselves, he focuses on what has been wrought by men and imposed on the landscape. The very name of the region Gharjistān (in Afghanistan), "country of the mountaineers",<sup>35</sup> evokes the rugged natural surroundings. But Muqaddasī sees first how "approaching this province are roads with iron gates, and it is not

<sup>33</sup> *Baladhurī* II, p. 46.

<sup>34</sup> *Baladhurī* I, pp. 246–247.

<sup>35</sup> Frye (2013, [http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/ghardjistan-SIM\\_2466](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/ghardjistan-SIM_2466)).

possible for anyone to enter without permission.”<sup>36</sup> The city of Bāb al-Abwāb, “gate of gates”, now Derbent in Dagestan, was located right at the foot of the Caucasus Mountains which defeated the soldiers in Sebeos’ abovementioned narrative. The geographer’s interest, however, is in how the town was protected “by the wall which separates it from al-Khazar,” the territory of the hostile nomads to the north.<sup>37</sup> This barrier is also discussed in Tabarī.<sup>38</sup>

The archetype of these manufactured defences is perhaps the rampart erected by Alexander the Great to guard against Gog and Magog, the “apocalyptic peoples” whose victory would accompany the end of the world.<sup>39</sup> This wall is mentioned in Arab histories and geographies alike, and its story is also told in the Qur’an (18, 93–98). Muqaddasī’s description of it is based on an account he heard about an expedition to see it. In this story the wall, like the one in Bāb al-Abwāb, is effectively an extension of the mountains themselves, but made of metal by men. On one side dwells an isolated community of Muslims and on the other their shadowy barbarian counterparts. The structure incorporates a gate and a door which are, somewhat paradoxically, most important for the fact that they are never opened and no one can pass through them. The local commander, writes Muqaddasī,

rides out every Friday with ten horsemen, every horseman having an iron mallet... They strike the bolt with those mallets, each man striking three times, so that whoever is behind the door will hear the sound and know that the guardians are there; and these will know that the those have done no damage to the door.<sup>40</sup>

In at least one Arabic source for this story the fearsome northern tribes are autochthonous, “said to originate from Adam’s nocturnal emission of semen mixed with earth.”<sup>41</sup> In this description there may be an echo of the ideas discussed above about the correlation of frontier-dwellers and the land. Yet the emphasis in the Arabic accounts remains on the structures themselves.

The focus on what is built and made could be read as reflecting a desire to demonstrate mastery over invaded lands and shape them in accordance with the ongoing needs of the Muslim peoples. In the course of the conquest of Iraq, about 638, the envoy to the Persians al-Mughīra b. Shuba objected passionately to a suggestion by his hosts that Arab expansion was motivated by “nothing but the narrow means of livelihood and by poverty.” The Muslims were compelled to fight the enemies of the faith and to win tribute from them, he argued.<sup>42</sup> The conquests were doubtless driven by a combination of these factors, as cogently expressed by the great Arab field commander Khālīd b. al-Walīd, addressing his soldiers after a battle with the Persians over fertile ground in Iraq:

<sup>36</sup> Muqaddasī 1994, p. 272.

<sup>37</sup> Muqaddasī 1994, p. 332.

<sup>38</sup> *Tabarī* 14, p. 38 and n. 189 (I, p. 2667).

<sup>39</sup> Van Donzel and Ott (2013, [http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudjwa-madjudj-COM\\_1353](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudjwa-madjudj-COM_1353)).

<sup>40</sup> Muqaddasī 1994, p. 320.

<sup>41</sup> Van Donzel and Ott (2013, [http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudj-wa-madjudj-COM\\_1353](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudj-wa-madjudj-COM_1353)).

<sup>42</sup> *Baladhurī* I, pp. 411–412. The same story appears in *Tabarī* (14, p. 11 [I, p. 2643]). See also “Dionysius reconstituted,” in Various (1993, p. 130), where the chronicler attributes the progress of the conquests to the fact that “acquisitiveness is habit-forming.”

By God, if struggle for God's sake and calling [people] to God were not required of us, and there were no consideration except our livelihood, the [wise] opinion would [still] have been that we strike this countryside until we possess it and that we leave hunger and decrease to whoever of those too slow to join your enterprise possesses them.<sup>43</sup>

Nevertheless, the impulse to possess the land seems strong. In Tabarī, Muslim soldiers travelling through Iran in 642–643 gave new names to all the natural features they saw until “their original names were obliterated.”<sup>44</sup> The soldiers are imagined as taking the place of the mountains themselves: “We brought upon [the Persians] our steel [armour] — ‘twas as if we were mountains looming up through the branches of the *qalāsīm* trees.”<sup>45</sup> While this comparison again recalls ideas about people taking on the characteristics of the high ground they are defending, here it seems less about belonging to a place than owning it altogether.

The issue of the causes of the Islamic conquests has long engaged modern historians.<sup>46</sup> Responses to mountainous landscapes in the Arabic sources, as discussed above, appear to support the argument that opening up new sources of income and supply, and perhaps land for settlers, was a key objective of the early conquests. But there are hints as well of the voices of the eighth- to tenth-century authors. The reign of the Abbasid caliphate, which oversaw that period, is a subject chiefly outside the scope of this article; however, the early caliphate (750–945) was a time of evolution *within* the boundaries of the new Islamic empire, of its “transformation... from an agrarian, military state to a cosmopolitan Empire with an intensive commercial and industrial life, the growth of large cities and the concentration of capital and labour.”<sup>47</sup> In such an environment — economic and cultural — it is surely unsurprising to find storytellers emphasising the Muslims’ rights over the land. Their representation of the highlands could therefore be interpreted as “conceived” space, reflecting the authors’ socio-political concerns.

Thus in the source material for the early Islamic conquests, mountains are both physical and ideated obstacles against Muslim armies. In Christian texts invaders are defeated by the terrain itself, but also by the people who inhabit it and share its characteristics. They are as much a refuge for their compatriots as the mountains themselves. On the other hand, in the Arabic texts the emphasis seems greater on manmade fortifications — gates and walls — than on the natural terrain and its human protectors. This distinction undoubtedly reflects the contrasting priorities of defenders and invaders, but it also casts light on authorial intent. The motif of mountains as safe haven may have been intended by Christian authors to galvanise and encourage contemporary audiences as much as to add to the historical record. In the Arabic texts, the attraction to the idea of man imposing himself on the mountains feasibly demonstrates a desire by the invaders to possess and use the territories in ongoing ways. This interpretation would feed into the continuing discussion about motives for the conquests, but the emphasis may also reflect — since

<sup>43</sup> Tabarī II, p. 20 (I, p. 2031).

<sup>44</sup> Tabarī 14, pp. 18–19 (I, p. 2648).

<sup>45</sup> Tabarī 14, p. 23 (I, p. 2652).

<sup>46</sup> Donner (1981, pp. 3–7) usefully provides a summary of major commentaries on the subject of motivations for the conquests up to the time of his writing.

<sup>47</sup> Lewis (2013, [http:// referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopedia-of-islam-2/Abbasids-COM\\_0002](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopedia-of-islam-2/Abbasids-COM_0002)).

these accounts were compiled after an end to rapid expansion — new priorities related to the consolidation of the nascent Islamic state.

Mountains as they are represented in the historiography of the early conquests can be interpreted as “perceived”, “lived” and “conceived” spaces. They are physical obstacles, but also backdrops against which the hopes of the defenders and aims of the invaders are played out in the thought-worlds of authors and audiences. They are the domain, as well, of the non-elite: a refuge for the otherwise powerless, defended not by famous champions but by ordinary mountainfolk drawing strength from their surroundings. Even David of Sassoun, who might be considered the superhuman exception, is very much the product and a part of his alpine environment. By contrast, the individual heroes of the conquest narratives are more often found in action around rivers, as will now be discussed.

## Rivers

Waterways such as the Euphrates, Tigris and Nile feature prominently, like mountains, in the historiography of the early Islamic conquests, where they appear both as solid features in the landscape and as symbolic boundaries in the discourse of war. Rivers hold up armies outside the walls of cities where they are employed in marshy or moat-like defences, and on the furthest frontiers of the conquests. But I will argue that they appear more often in the source material as temporary obstacles and scenes of a particular type of action. These episodes involve protagonists registering a major challenge on the opposite bank of a river then choosing to negotiate a crossing to the other side, where they face their opponents and achieve a significant resolution. In traversing rivers, they alter the course of events and, furthermore, mark themselves out as heroes. The Muslim and Christian historians who locate these inspiring and exemplary figures on the riverbanks may intend to encourage their audiences as much as inform them, but in the Arabic texts river crossings are also used to highlight complex issues about command and decision making. Representations of rivers in the historiography of the early conquests can be interpreted as examples of “perceived”, “lived” and “conceived” space. Depending on the points of view of author and audience, rivers are variously physical barriers, scenes of heroic effort and backdrops to the denouement of socio-political issues in the early Islamic empire.

### *Rivers as Scenes of Contact and Resolution*

One way that rivers formed tangible barriers to armies was when they were incorporated into a city’s defences. It was said in the eighth century that Amorium in Asia Minor was made unsailable by its swampy setting.<sup>48</sup> Tustar on the Karun River in southwest Iran was considered “very extensive and strong, because of the mighty rivers and canals that surround it on every side like moats.”<sup>49</sup> It seems that horses were especially vulnerable to this kind of environment.

<sup>48</sup> *Lewond*, pp. 141–142. Amorium, in modern Turkey, is no longer surrounded by marshes, perhaps due to the damming of the River Sakarya, or to climate change.

<sup>49</sup> From the *Khūzistan Chronicle* in Robinson 2004, p. 17. This city is present-day Shustar, Iran.

Outside Pella, the waters of the Jordan were actively used against them when, in *ca.* 634, a Byzantine army released the contents of irrigation channels to turn the earth to mud and bog down the mounts of the enemy soldiers who pursued them. The setback for the Muslims was only temporary, but from then on they called this “the place of thick mud”.<sup>50</sup> So waterways, like mountains, could represent physical obstacles to progress, but the nature of rivers as limits was different. Unlike a mountain range, negotiating the waterways themselves was not the main issue; that was commonly achieved by means of fords or bridges (temporary or permanent), in boats, or by swimming the horses across. More important, as will be shown, was a warrior’s *intent* when making the crossing.

Rivers can be read as “barriers”, but they also — perhaps more often than mountains — act as “bridges”, to borrow Kaegi’s terminology,<sup>51</sup> between opposing forces. The Karun itself became the pathway into Tustar, which fell to Abū Mūsā Ash’arī in 642, when a faithless local led the way to tunnels under the walls via a row of stepping-stones along the river.<sup>52</sup> After his victory over Egyptian Babylon, Amr b. al-Ās had a bridge built nearby in such a way as to make travel along the Nile no longer possible for the boats of either army, while at the same time enabling horses to cross over to the east bank.<sup>53</sup> In this case, movement along the frontier, parallel to the action, is stopped but traversing into new territory is made possible. The impetus is forwards.

In the source material, the deliberate act of crossing the river and engaging your opposition denotes worthy men and admirable behaviour. Lewond writes approvingly of a small band of pious Armenian leaders who, although they knew they were almost certain to die, “crossed the River Arsanias and attacked the enemy with fervent courage.”<sup>54</sup> The river crossing here instigates the action that concludes later with the Armenians, angels said to be fighting by their sides, falling as “martyrs” to their Muslim foes.<sup>55</sup> The same motif appears in the Arabic sources: the decision to cross the river is made, the means to do so are secured and, following a confrontation, the protagonists’ narratives are satisfactorily resolved on the other side. Chasing Persian soldiers from the battlefield at Qādisiyya, Iraq, *ca.* 637, the renowned Muslim commander Sa’d b. Abī Waqqās comes to a halt at the Tigris River. Opposite him, on the east bank, is the hub of the administrative capital of the Sasanian empire, al-Madā’in (Ctesiphon). The river is central to Tabarī and Baladhurī’s animated accounts of the clash that follows.<sup>56</sup> Sa’d is first confronted with the problem of no bridge or boats to carry his army over to the enemy. But he receives intelligence from local people about the best place to negotiate the crossing on horseback and is also sent an instructive dream.<sup>57</sup> Now convinced he knows the right course of action, Sa’d orders his willing men and their horses into the Tigris. “By God,” one of the soldiers exclaims,

<sup>50</sup> *Tabarī* II, pp. 160, 164 (I, pp. 2145–2146, 2151); see also Kennedy 2007, pp. 78–79.

<sup>51</sup> Kaegi 1986.

<sup>52</sup> *Baladhurī* II, p. 117. See Robinson (2004, p. 29) for confirmation that the city was thus betrayed, and for means of entry being “water tunnels under the walls.”

<sup>53</sup> John of Nikiu, 113.3.

<sup>54</sup> *Lewond*, p. 136. The Arsanias is the Murat River, now in eastern Turkey.

<sup>55</sup> *Lewond*, p. 136.

<sup>56</sup> *Tabarī* 13, pp. 12–19 (I, pp. 2432–2439), *Baladhurī* I, p. 418.

<sup>57</sup> *Tabarī* 13, pp. 12–14 (I, p. 2432).



“crossing rivers has become as easy for [the horses] as crossing the desert.”<sup>58</sup> The Arabs are victorious and when their opponents flee the city they leave behind not only rich spoils, but the way open to the rest of Iraq.<sup>59</sup>

Rivers appear in similar ways in near-contemporary literary works featuring legendary champions; examples include the Armenian *Alexander Romance*<sup>60</sup> and the Byzantine epic, *Digenis Akritis*.<sup>61</sup> These instances in turn reflect a wider employment of this literary topos, in which the protagonist proceeds to a place where he (or she?) faces a great foe across a river, pauses as if to contemplate the gravity of the situation, takes decisive action to cross and then scores a victory which dramatically changes the course of events and sometimes history. Perhaps the most famous case in point is Plutarch’s description of Caesar at the Rubicon:

When he came to the [river]... and began to reflect, now that he grew nearer to the fearful step and was agitated by the magnitude of his ventures, he checked his speed... But finally, with a sort of passion, as if abandoning calculation and casting himself upon the future, and uttering the phrase with which men usually prelude their plunge into desperate and daring fortunes, “Let the die be cast,” he hastened to cross the river.<sup>62</sup>

The common ground, where the river is central, between legendary or literary heroes and key figures in the histories of the conquests reinforces the message that the latter are champions too. This association also illuminates the qualities that such a person was thought to embody. The hero of both sides of the early conquests is a warrior, possessed of courage and keen intent. He is located on the frontiers, rather than in cities or towns. The presence of figures like these in the histories of the early conquests further indicates that the texts were meant to give heart to audiences as well as record events. They are exemplars of valour to reassure defenders and inspire conquerors. But not all the qualities of these champions are unproblematic. Their courage is of a reckless kind and, as will be seen, the riverine setting is important for working out the implications of that as well.

### *The Dual Nature of Rivers*

The association between crossing rivers and bravery is reinforced in the way such journeys are shown to be fundamentally dangerous. Drowning is commonplace in narratives of this kind, and defeated soldiers are especially susceptible.<sup>63</sup> Many Muslim soldiers perished this way in the aftermath of the Battle of the Bridge in Iraq in 634. When the defeat of Abū Ubayd b. Mas‘ūd’s army by the Persians was imminent, one of his own men cut the bridge across the Euphrates which would have been their only way of escape.<sup>64</sup> Again, traversing the river is linked with

<sup>58</sup> *Tabarī* 13, p. 17 (I, pp. 2436–2437).

<sup>59</sup> *Tabarī* 13, pp. 19–20, 22, 24–28 (I, pp. 2439–2440, 2442, 2444–2448).

<sup>60</sup> In the fifth-century *Romance*, the hero negotiates the River Stranga in order to call upon his Persian counterpart, Darius, to fight. The journey is difficult and dangerous. In the battle that follows, Alexander scores a most decisive victory (Pseudo-Callisthenes 1969, pp. 93–99).

<sup>61</sup> *Digenis Akritis* (Anonymous 1998), 6.572–639, 7.5, 200–209.

<sup>62</sup> Plutarch 1958, ch. 32.

<sup>63</sup> See, for example, *Lewond*, pp. 53, 60; *Sebeos* I, p. 8, and “A chronicle composed about AD 640,” in Various 1993, p. 21.

<sup>64</sup> *Tabarī* 11, pp. 189, 192–193 (I, pp. 2175, 2179).

demonstrating courage, but here by means of highlighting the reverse. The men are forced to stand and fight, or else die by drowning. Going *back* across the water may be read as a cowardly act and in fact those who manage to complete the journey (once the bridge is repaired) are said in *Tabarī* to have felt great shame and sorrow.<sup>65</sup>

But the direction of travel has additional significance in this story. At the outset the Persians give Abū Ubayd the choice of crossing the Euphrates to fight or having them come to him. His advisors tell him they much prefer the option of calling the opposition over, but he remains adamant that the Muslims should go forward. He does not want the Persians to seem the braver men: “They will not risk death more than we.”<sup>66</sup> The point that his decision is wrong is made more than once. The recommendation that the Muslims do not cross is called “wise”, and indeed Abū Ubayd pays the ultimate price for his decision when he is killed in the fighting.<sup>67</sup> A short time later and elsewhere on the Euphrates, the opportunity is said to have arisen for the Muslims to engage the Persian forces once again. This time the commander, Muthannā b. Hāritha, is content to let the enemy come to him.<sup>68</sup> In such a way he is complying with an order by the caliph Umar “not to cross any body of water nor any bridge except after a victory.”<sup>69</sup> Umar had also made it clear that Abū Ubayd and his men should not have hesitated to escape back across the Euphrates once they knew that battle was lost; the bridge should never have been cut.<sup>70</sup>

The *Chachnāmah*, a record of the invasion of Sind (in modern Pakistan) in the early eighth century, helps clarify the crossing motif as it appears in relation to the Battle of the Bridge. The Muslim general in the field, Muhammad Qāsim, is advised by the central administration, in the form of the governor of Iraq, Hajjaj b. Yūsuf al-Thaqafī, that it is of key importance to control who will cross the Indus River to fight, as well as where and when.<sup>71</sup> Muhammad accordingly takes the challenge up to his opponent, Dāhar, the Hindu ruler of Sind. “Make your choice,” he says, “either cross the river to us... or else keep the way open for us, so that the Arab army may cross the river and march against you.”<sup>72</sup> Dāhar — like Abū Ubayd, keen to demonstrate his courage — hands the choice back to Muhammad in turn.<sup>73</sup> Muhammad refers the matter again to Hajjaj, who a short time later advises: “In any way you can, do cross the river. Show your bravery and heroism, and success and victory will attend you.”<sup>74</sup> Thus Muhammad’s admirable behaviour and achievements, although (as elsewhere) associated with the river crossing, will now be the result of following orders as much as taking action in the field. Hajjaj goes as far as to describe himself as having given Muhammad “permission to cross the river and fight,” and

<sup>65</sup> *Tabarī* II, pp. 189, 193, 194–195, 198 (I, pp. 2175–2176, 2180, 2182, 2185).

<sup>66</sup> *Tabarī* II, p. 188 (I, pp. 2175). See also *Baladhurī* I, p. 403 for advice against crossing.

<sup>67</sup> *Tabarī* II, pp. 189–189 (I, p. 2175).

<sup>68</sup> *Tabarī* II, pp. 197–198 (I, pp. 2184–2185).

<sup>69</sup> *Tabarī* II, p. 200 (I, p. 2187). It is interesting to note in the context of what follows that Umar, in fact, made a number of pronouncements in various forms that he should never be separated from his people by a substantial body of water; see Hinds (1984, n. 53) for a list of examples.

<sup>70</sup> *Tabarī* II, pp. 193 (I, p. 2180).

<sup>71</sup> Kufi 1979 [1990], p. 102.

<sup>72</sup> Kufi 1979 [1990], p. 109.

<sup>73</sup> Kufi 1979 [1990], pp. 109–111.

<sup>74</sup> Kufi 1979 [1990], pp. 112–113.

even offers to choose the crossing point in advance if he is sent a rough map from the field.<sup>75</sup> In the end Muhammad crosses to the east bank of the Indus and defeats Dāhar, bringing the conquest of Sind to its successful conclusion.<sup>76</sup>

The “river crossing” motif in the story of the Battle of the Bridge likewise involves the relationship between centre and periphery. In this case, however, there is tension rather than complement between the actions of the commander in the field, who dives headlong into the conflict on the other side of the Euphrates, and the concerns of the more cautious central authority, now represented by Umar b. al-Khattāb. Umar, the second caliph (634–644), was a crucial figure in the establishment of the new Islamic state and from his base in Medina continued the work of the Prophet by instituting policies designed to ensure that its centre would hold.<sup>77</sup> In particular, he established a register (*dīwān*) of Muslims who were due military stipends and a share of taxes collected from conquered peoples who remained on the land. This system was intended to encourage the Muslims to congregate in communities and be available for military service rather than dispersing onto private estates in new territories. Also to this purpose, Umar founded garrison towns including Kufa and Basra.<sup>78</sup> In Tabarī’s history, Umar intervenes directly in affairs around the Battle of the Bridge and he does so in his role as central authority. His position puts him fundamentally at odds with the impulses of his commander in the field, Abū Ubayd, operating on the periphery and driving his army always forward and away from the centre.

Just as rivers themselves incorporate contradictions — barrier and bridge, stalemate and action, life-giving water and drowning deaths — they are also the scene in Tabarī’s account of the Battle of the Bridge for working out complex issues about leadership. The general in the field is brave, but is he also reckless?<sup>79</sup> And if he is reckless, what are the implications and consequences of that? Is the action on the frontiers in fact best directed from the centre? These types of questions might reflect competing priorities among the compilers and transmitters of the Arabic histories. Whittow remarks on the tension between accounts of the establishment of Islam in conquered territories and stories of military conquests in the field.<sup>80</sup> The river is a place where the aims of authors wishing to affirm the importance of central authority to the dissemination of the religion meet those of storytellers spreading tales of dashing conquerors on the frontiers.

In conclusion, while rivers appear in both the Islamic and the Christian historiography of the early Islamic conquests as physical barriers against armies, they also occur as boundaries invested with symbolic meaning. Rivers are repeatedly the scenes of a certain kind of action: protagonists pause before crossing, engage important enemies on the other side, then achieve resolution.

<sup>75</sup> Kufi 1979 [1990], p. 115. Kennedy (2007, p. 297) comments on the importance made in the *Chachnāmah* of Hajjaj’s close control over Muhammad’s activities on the frontiers. He also observes that although the *Chachnāmah* might be considered fairly unreliable as history, certain of its themes are instructive and it also probably contains some original eighth-century material. *Baladhurī* (II, p. 218) also records Hajjaj’s close involvement in the campaign.

<sup>76</sup> Kufi 1979 [1990], pp. 121–149.

<sup>77</sup> The importance of Muhammad’s centralising principles and policies to the stability of the early Islamic state is a key theme of Donner (1981, ch. 3, especially pp. 54–75).

<sup>78</sup> Levi Della Vida and Bonner (2013, [http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/umar-i-b-al-khattab-SIM\\_7707](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/umar-i-b-al-khattab-SIM_7707))

<sup>79</sup> See *Tabarī* 13, p. 14 n. 47 on the distinction in Arabic which shows that there is “courage which urges a warrior to surge recklessly forward into battle,” but also a different kind of courage that “shows his composure in times of... ‘hardship’.”

<sup>80</sup> Whittow 1996, pp. 84–85.

Because of their demonstrated bravery and success, it appears that characters who undertake these journeys are marked out in the texts as heroes. This impression is reinforced by repetition, with the same motif appearing in accounts of famous and familiar champions including Alexander the Great and Julius Caesar. Tales of this kind are, like some stories about mountains, plausibly intended to rally audiences by reassuring them that their best defenders are in action on the frontiers. The riverine setting in such cases may be interpreted as “lived” space, its representation fundamental to engendering the aimed-for personal and emotional responses. In the story of the rout of the Muslims at the Battle of the Bridge, however, the crossing motif is employed to make a related but different point. Bravery remains a key theme, but here the landscape is also the backdrop for exploring tensions between the centre and the periphery of the expanding Islamic empire. In this account the river is feasibly space “conceived” by the storyteller to convey a message about his own politics and society.

### Forces of Nature

While mountains are the domain of ordinary people staging resistance and finding refuge, and famous champions of both sides can be found beside the rivers, arguably the most powerful figures of all are located in a third geographical sphere: places which are chiefly characterised by forces of nature, such as extreme heat or cold, floods, storms or earthquakes. Just as with mountains and rivers, there are both physical and symbolic aspects to how spaces of this kind are depicted. Armies could be severely damaged — to the point of defeat and death — by harsh and unfamiliar climates, and military expeditions and settled communities alike were threatened with extinction by floods, storms or earthquakes. Nevertheless, it was possible for even the worst conditions to be mastered by remarkable men. Like the protagonists in the river stories, they too are heroes. But, as will be shown, they are differentiated by their remarkable piety and this has implications in the way the spaces in which they operate can be interpreted.

### *Climate as Barrier*

Extreme and unfamiliar climates overwhelmed soldiers on both sides of the conflicts, in regions far from the centres of empires. Sebeos records that the Byzantine ruler Heraclius’ large army was overcome by “great distress from the heat of the sun” during an early defence of Palestinian territory (here, “Arabia”, *ca.* 634–635). The soldiers found the desert sands impossible to negotiate and were slaughtered in large numbers.<sup>81</sup> In “ignorance,” adds Lewond, they had left their horses behind and gone out on foot.<sup>82</sup> Kaegi notes in regard to Egypt that there was little in the Byzantine military manuals to prepare armies for fighting in the unfamiliar conditions there.<sup>83</sup> Heraclius pre-empted problems some northern allies might have in Iraq by sending them home for the hotter months.<sup>84</sup> Conversely, there are reports that Muslim armies were especially vulnerable to

<sup>81</sup> *Sebeos* I, p. 97 and II (commentary), pp. 240–241.

<sup>82</sup> *Lewond*, p. 49.

<sup>83</sup> Kaegi 1998, p. 53.

<sup>84</sup> Movses Dasxuranc’i 1961, p. 86.

cold and snow. In one instance, a force in Armenia was met with “biting cold and the icy storm, the violently intense weather detained the forces of the Arabs and prevented them from unleashing their power.”<sup>85</sup> Ordinary human strength was no match for the might of nature.

Problems of this kind could be overcome to some degree by good planning as to timing and target. In particular, knowledge about the availability of food and water was crucial, and this meant being aware of what resources were available along an army’s route at different times of year.<sup>86</sup> In such a way, it was possible to mitigate to some extent the problem of an incoming force’s essential “otherness”; nevertheless, the elements were a formidable foe — and a neutral one, testing armies on both sides. But examples do exist of even the most severe conditions being mastered, as will be seen below.

### *Subduing the Forces of Nature*

In 634, Khālīd b. al-Wālīd, a larger-than-life figure in the record of the early conquests, was ordered into Syria from Iraq by the first caliph, Abū Bakr. In order to surprise Heraclius’ troops near Yarmūk in Syria, Khālīd proposed travelling through the parched and scorching desert in order to approach the enemy from an unexpected direction. Experienced guides warned: “We know only of a route that does not bear armies, which the lone rider takes. Do not by any means expose the Muslims.”<sup>87</sup> Undeterred, Khālīd devised novel ways of providing water for men on the march and their horses, methods that included drinking from the bellies of their camels:

Each leader made thirsty enough of the older female camels to suffice him, then gave them to drink once and yet again. They made the camels prick up their ears [from thirst], covered [their mouths] with bags... and left their backs free [of loads]... When they had travelled for a day, they pressed the water out of the stomachs of ten of those camels for every group of horses, mixing what was in their stomachs with whatever milk there was. Then they gave the horses to drink and themselves took a swallow for a drink. They did that for four days.<sup>88</sup>

Finally emerging from the desert, the general and his soldiers “prepared themselves and then attacked, the enemy not believing that any army could cross [the desert] to them.” Famous victories ensued.<sup>89</sup>

The story of Khālīd’s journey arguably has greatest meaning in the context of “lived” space: the way the audience might imagine and respond emotionally to the scenes in the desert. Khālīd was an early convert to Islam, between 627 and 629,<sup>90</sup> and was instrumental in many of the victories of the incipient Islamic empire on the Arabian Peninsula and in Iraq and Syria. Importantly, as well as being renowned for his military and tactical prowess, Khālīd is characterised in Tabarī by his close relationship to God. He is called the “sword of Allah” and is reported as saying he was

<sup>85</sup> *Lewond*, p. 60. See also *Sebeos* I, p. 146 and *Baladhurī* I, p. 490, for a Muslim army “caught by a snow storm” in Iran in 649–650.

<sup>86</sup> Haldon 1999, pp. 166–174.

<sup>87</sup> *Tabarī* II, p. 113 (I, p. 2112).

<sup>88</sup> *Tabarī* II, pp. 113–114 (I, pp. 2112–2113).

<sup>89</sup> *Tabarī* II, p. 114–115 (I, pp. 2113–2114).

<sup>90</sup> Crone (2013, [http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/khalid-b-al-walid-SIM\\_4149](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/khalid-b-al-walid-SIM_4149)).

so named by the Prophet himself.<sup>91</sup> Before heading into the arid desert, Khālīd strengthened the resolve of his men by reminding them that God would aid them to just the extent that they were committed to the cause. In turn, they acknowledged that Khālīd was a man whom God had singled out for special favour, and so they would follow him into the wilderness.<sup>92</sup> There are other examples in Tabarī of Khālīd managing the elements with divine help: God sends rain to sustain his army in another “waterless place,”<sup>93</sup> and also enables his soldiers to withstand extreme cold during a long siege at the Syrian city of Homs.<sup>94</sup> These narratives, set in places characterised by harsh climate, were surely meant to convince audiences that, to a significant extent, it is Khālīd’s true faith which enables him to prevail heroically over the elements.

This kind of mastery over nature also appears in Christian sources, where again it is associated with the notably devout. St George of Amastris is the subject of a ninth-century saint’s *Life* which registers that at one point he deflected an Arab raid on his Black Sea community. Elsewhere in the text, the saint’s ability to still a violent storm is a source of wondrous admiration for his biographer. He enthuses that while miracles that heal the sick and drive away demons are everyday, “to order the elements, to command the waves of the sea as if to bridle them permanently, this, I mean this, is the work of divine nature.”<sup>95</sup> Extraordinary control over the forces of nature is attributed even more directly to piety in the *Life*: “The one who keeps the commandment... will have the earth and sea as his servants.”<sup>96</sup> St Theodore of Sykeon is another holy man who possesses powers of this kind, using them to aid the farming communities which are his milieu, sometimes causing rain to fall and other times stopping floods and storms.<sup>97</sup>

In these examples, the uncommon piety of the protagonists is fundamental to their ability to prevail over extremes of nature. If God’s power on earth is manifested in the elements, the ability to subdue them might be associated with a kind of intercessory power allowed these men because of their special devoutness. Indeed, another feature distinguishing them from the heroes beside the river is that they act alongside their people rather than at a distance from them. In such a way, they set a direct example. They model correct behaviour for audiences as well. The message is arguably that faith will make you fearless and enable you to prevail. And faith of this kind, unlike superior courage or military prowess, is a trait which is, at least in theory, possible for anyone to attain. The settings of these stories — in “lived” space — give this message its effect.

### *Wielding the Elements*

The pious champions so far discussed defeat the elements, but they do not and presumably cannot actively use them against their enemies. The Armenian folk hero David of Sassoun, however, is able to do so. David’s special connection with both heaven and the elements is signalled

<sup>91</sup> Tabarī 11, pp. 95–96 (I, p. 2097).

<sup>92</sup> Tabarī 11, p. 113 (I, p. 2112).

<sup>93</sup> Tabarī 11, pp. 12–13 (I, p. 2024).

<sup>94</sup> Tabarī 12, p. 175 (I, pp. 2390–2391).

<sup>95</sup> Anonymous 2001, ch. 36.

<sup>96</sup> Anonymous 2001, ch. 28.

<sup>97</sup> Anonymous 1977; for example, in chapters 14, 51, and 101, the saint causes rain to fall in order to prove his piety, in chapters 45, 53 and 141 he diverts rivers to stop flooding or otherwise assist farmers, and in chapters 52 and 144 he stops damaging hailstorms.



from birth, when the news of his imminent arrival is delivered to his father by “a fiery angel, / His feet enwrapped in billowing clouds.”<sup>98</sup> David’s piety is demonstrated in the poem when, as a young adult, a pillar of fire carries him to the mountaintop site of a monastery dedicated to the Madonna. Discovering that it had been razed by Muslim forces, he refuses to rest until he has rebuilt it.<sup>99</sup> Fire and lightning are among David’s military accoutrements. An attack on his enemy, Malik, is described as follows: “Thus he roared, and goading his fiery steed,/ came down like a lightning-bolt as from a cloud,/ Spread terror among the Egyptian [Muslim] armies,/ On all sides brandishing his Lightning-Sword.”<sup>100</sup> The ensuing single combat has the effect of an earthquake, a storm and then a hurricane.<sup>101</sup> After the dust finally settles, David stands like a mountain, “fog-shrouded, majestic,”<sup>102</sup> as such embodying all the solid impassability of the alpine landscape whence he comes. He also incorporates the power of earth, air and fire and is able to turn it against his enemies. That this is possible reflects his status as a literary hero and composite figure, rather than as a straightforwardly historical one: “David must be regarded as a figure who stands for reality, rather than one who is real.”<sup>103</sup> He is able to perform the supernatural.

Where mortal men and women take the leading roles in the narrative, it is God Himself who is shown wielding the elements to help believers. Sebeos records that as a massive army approached Constantinople by sea in 654, the emperor Constans II’s pious prayers for aid were answered as follows:

The Lord looked down from heaven with the violence of a fierce wind, and there arose a storm, a great tempest, and the sea was stirred up from the depths below. Its waves piled up high like the summits of very high mountains, and the wind whirled around over them; it crashed and roared like the clouds, and there were gurglings from the depths... the ships broke up, and the host of soldiers were drowned in the depths of the sea... On that day by his upraised arm God saved the city through the prayers of the pious king... When the Ismaelites saw the fearsome hand of the Lord, their hearts broke.<sup>104</sup>

This motif is not confined to the Christian sources, although it is strongest there. In Tabarī, God’s wrath, made manifest in the elements, is directed at the defenders. The historian describes how at the conclusion of a long siege at Homs (Syria), the Muslims’ cry of “God is most great!” brings on an earthquake. As the city crumbles around them, and facing imminent defeat, the inhabitants of the city exclaim, “Do you not see the punishment of God?”<sup>105</sup> In the historical record of the conquests this is not the only time the Christian God is understood by His own people to be using the elements to chastise them. The theme appears in the Christian sources as well; Lewond, for example, describes how hailstorms and earthquakes were among the many miseries suffered by the Armenians under Muslim rule, considering them demonstrations of the anger of a God who “seek[s] revenge for our evil deeds.”<sup>106</sup> God employs the elements to aid and protect the faithful, but they are also the instruments of His anger against sinners. The line between forces of nature as means of deliverance or crushing blow is a fine one and it is the pious who are on its right side.

<sup>98</sup> *David of Sassoun*, p. 70.

<sup>99</sup> *David of Sassoun*, p. 84.

<sup>100</sup> *David of Sassoun*, p. 95.

<sup>101</sup> *David of Sassoun*, pp. 104–105.

<sup>102</sup> *David of Sassoun*, p. 105.

<sup>103</sup> *David of Sassoun*, p. 58 (introduction).

<sup>104</sup> *Sebeos* I, pp. 145–146; see also *Sebeos* II (commentary), p. 275.

<sup>105</sup> *Tabarī* 12, pp. 176–177 (I, pp. 2391–2392).

<sup>106</sup> *Lewond*, pp. 128–129.

*True Faith?*

It is easy to imagine that accounts of devout heroes taming the elements evoked feelings of admiration and also of comfort in audiences. The ability of these characters to manage their environment, based as it is on personal piety, is something to which anyone can aspire. Their stories communicate the possibility of agency even in the face of daunting odds, with success depending on strength of faith alone. As such, these stories are set in “lived” space, landscapes of the mind. But for Christians, definitions of true faith in this period differed and depended on point of view. A narrative about God’s support for one side or the other, as expressed through the elements, might also reflect the author’s own position on what constituted religious orthodoxy, and his worldly desire to promote it.

A detailed analysis of doctrinal disagreements and their effects amongst seventh-century Christians is not possible here. But the point that the religious positions of Christian authors may have affected how they depicted the spaces characterised by forces of nature can be illustrated by one, in a sense negative, example. In the historiography of the conquests Sebeos provides the only detailed account of the naval attack, mentioned above, on Constantinople in 654. This raises doubts about its historicity and whether it might be a confused reference to a later expedition. Sean O’Sullivan, however, makes a convincing case for its authenticity on a number of grounds.<sup>107</sup> He also notes allusions to what appears to be the same episode in other Christian histories and chronicles although, importantly, they do not mention it directly.<sup>108</sup> “It seems possible,” he concludes, “that [the] account... is the remnant of a longer description of East Mediterranean naval events in 654–5, whose centrepiece recorded a Muslim attack on Constantinople in 654.”<sup>109</sup>

O’Sullivan posits that the absence of direct references to the confrontation is because this part of the story would have been cut from the chronicles on which the later versions were based. Constans, as a major supporter of the Monothelite doctrine, was despised within the Chalcedonian Syrian environment which likely produced the original chronicles, and “[his] memory came to be so execrated... that the Empire’s sufferings were attributed to his actions, regardless of historical and chronological fact.”<sup>110</sup> There was no place in this tradition for an account of Constans’ heroic success based on his true faith. “One record alone of the 654 attack was preserved,” writes O’Sullivan of Sebeos, “because it arose in Monophysite circles, which neither regarded Constans with hostility, nor were subject to the imperial condemnation of Monothelitism.”<sup>111</sup> The fact that the message behind the story of the 654 attack on Constantinople was deemed important enough to suppress also demonstrates the reverse: that to include narratives of this kind in the historical record sends a powerful message about what constitutes true religion. Here, space which is defined by forces of nature has perhaps been “conceived” of by authors intending to strengthen such a message.

Sites of extreme climate or forces of nature were barriers against armies, like mountains and rivers, but the story of Khālid’s progress across the desert conveys the notion that obstacles of this kind could be overcome by the right kind of champion. Such a figure is characterised by his

<sup>107</sup> O’Sullivan 2004, pp. 68–72.

<sup>108</sup> O’Sullivan 2004, pp. 72, 74.

<sup>109</sup> O’Sullivan 2004, p. 74.

<sup>110</sup> O’Sullivan 2004, pp. 75, 77.

<sup>111</sup> O’Sullivan 2004, p. 77.

nearness to God. Exceptionally pious men in Christian texts also demonstrate mastery over the elements. These men, and Khālid, are exemplary figures, who model pious behaviour for audiences and demonstrate its rewards. But in the stories discussed above, only the superhuman David of Sassoun, a literary hero, is able to use the elements actively against his enemies. In the histories, God alone wields the elements in such a way. In an extension to the idea of piety as the key to mastering nature, here the devout call out for God's aid against their enemies and it is delivered in the form of storms and earthquakes. Elsewhere, Christians believed that God's wrath against them was demonstrated in the same way, and piety in this context becomes a defence. Thus climate and forces of nature exist in "lived" space, as backdrops to scenes likely to elicit deeply emotional and personal responses. But they are also an important component of "conceived" space when authors choose to exemplify only pious heroes whose brand of faith is consistent with their own.

## Conclusion

In spite of the example of the 654 attack on Constantinople, a pattern emerges overall wherein among Christian sources more spaces might be classified as "lived" than "conceived", whereas in the Arabic texts the reverse applies. This distinction reflects the divergent perspectives of defenders and invaders. It also reveals the contrasting positions of Christian and Muslim authors relative to the matters they describe. Christian writers such as Sebeos and Łewond record events occurring near enough to their own times that their communities remained under pressure from new masters or from Arab raiders. It is therefore plausible their stories of hope, personal agency and the possibility of prevailing against the odds were intended to encourage and inspire readers as much as to document events. On the other hand, the accounts of Muslim historians were often more concerned with matters relating to politics and wider society. Working at a time when the new Islamic empire was being defined and consolidated, they were moved to explore and explain issues of importance to these processes.

But the distinctions between Arabic and Christian texts are far from complete. The traditions also had much in common. Both, for instance, recognised mountains, rivers and the sites of extreme climate and forces of nature as potentially impassable barriers. Both Muslim and Christian champions were located beside rivers and at the point of contact with forces of nature, and many of their heroic qualities were shared. Both traditions stressed the importance of personal piety to ensuring God's support for one's endeavours and avoiding his wrath. Hoyland is of course right to observe the following:

That all parties most frequently faced the same physical constraints, frequently encountered the same problems, were influenced and shaped by like forces and ideas — in short, lived in the same world — is too often forgotten. The sharp line that is usually drawn between Muslim and non-Muslim sources [is] shown rather to be somewhat blurred on closer inspection.<sup>112</sup>

References to mountains, rivers and forces of nature are pervasive in all kinds of source material for the early Islamic conquests. On the most fundamental level, this reflects the physical

<sup>112</sup> Hoyland 1997, p. 4.

geography of the theatre of action (“perceived” space), but geographical features also have symbolic meaning in the texts. Their depictions at times reflect the worldviews of audiences (“lived” space) and the ideological interests of the authors (“conceived” space). A unified study of these various representations of space elucidates their common theme: how the limits and boundaries of the conquests could be extended or contained by individuals, armies or whole communities, in the physical world, but also in hearts and minds.

## Abbreviations

The following abbreviations have been used for works frequently cited in the text:

- Baladhuri* 1916–1924 *The Origins of the Islamic State*, 2 vols. Translated by P. Hitti and F. Murgotten. New York: Columbia University.  
Cited with volume number.
- David of Sassoun* 1961 Sasowntsi, D., *David of Sassoun: Armenian folk epic*. Translated with critical introduction and notes by A. Tolegian. New York: Bookman Assoc.
- Ēwond* 1982 *History of Ēwond, the Eminent Vardapet of the Armenians*. Translation, introduction and commentary by (Rev.) Z. Arzoumanian. Philadelphia: St Sahag and St Mesrob Armenian Church.
- Sebeos* 1999 *The Armenian History*, 2 vols. Translated, with notes, by R.W. Thomson, historical commentary by J. Howard-Johnston, assistance from T. Greenwood. Liverpool: Liverpool University Press.  
Cited with volume number.
- Tabarī* 1985–1999 *The History of al-Tabarī*. Edited by Y. Yar-Shater. Vols 1, 11–15, 32, 40. Albany, New York: State University of New York Press.  
Cited with volume number, and in brackets the volume numbers from the Arabic text in the Leiden edition which formed the basis of this translation (refer vol. 1, p. xii).

## Bibliography

### Other Primary Sources

#### Anonymous

- 1977 “The life of St. Theodore of Sykeon,” in *Three Byzantine Saints: Contemporary Biographies*. Translated by E. Dawes with introductions and notes by N.H. Baynes, pp. 87–185. London: Mowbrays.
- 1998 *Digenis Akritis: The Grottaferrata and Escorial Versions*. Edited and translated by E. Jeffreys. Cambridge, UK; New York: Cambridge University Press.
- 2001 *The Life of St George of Amastris*. Translated by D. Jenkins, S. Alexopoulos, D. Bachrach, J. Couser, S. Davis, D. Hayton and A. Sterk. University of Notre Dame.

#### Ferdowsi

- 1925 *The Shāhnāma of Firdausī*, Vol. 9. Translated by A.G. Warner and E. Warner. London: Kegan Paul, Trench, Trübner & Co. Ltd.

#### Ibn Hauqal

- 1964 *Configuration de la Terre (Kitab surat al-ard)*. Introduction and translated, with index by J.H. Kramers and G. Weit. Paris: Éditions G.-P. Maisonneuve et Larose.

John of Nikiu

- 2007 *The Chronicle of John, Bishop of Nikiu: Translated from Zotenberg's Ethiopic Text* (Christian Roman Empire Series, 4). Translated with an introduction by R.H. Charles. Merchantville, New Jersey: Evolution Publishing. Original edition, London: Williams and Norgate, 1916.

al-Kūfī, Alī b. Hamīd

- 1979 [1900] *Chachnāmah: An Ancient History of Sind*. Translated by. Delhi: Idarah-i Adabiyat-i Delli.

Movses Dasxuranc'i

- 1961 *The History of the Caucasian Albanians*. Translated by C.J.F. Dowsett. London: Oxford University Press.

Al-Muqaddasī

- 1994 *The Best Divisions for Knowledge of the Regions (Ahsan al-taqasim fi ma'rifat al-aqalim)*. Translated by B.A. Collins, reviewed by M.H. al-Tai. Centre for Muslim Contribution to Civilization and Garnet Publishing Limited.

Plutarch

- 1958 "Caesar," in *Plutarch's Lives*, Vol. 7. Translated by B. Perrin, pp. 441–609. London: William Heinemann Ltd, The Loeb Classical Library.

Pseudo-Callisthenes

- 1969 *The Romance of Alexander the Great by Pseudo-Callisthenes*. Translated from the Armenian version by A.M. Wolohojian. New York: Columbia University Press.

Various

- 1993 *The Seventh Century in the West-Syrian Chronicles Including Two Seventh-Century Syriac Apocalyptic Texts* (Translated texts for historians, 15). Introduced, translated and annotated by A. Palmer. Liverpool: Liverpool University Press.

#### *Secondary sources*

Bosworth, C. E.

- 2013 "Al-Ṭabarī," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/al-tabari-COM\_1133 (30 March 2013).

Cameron, A.

- 1999 "New themes and styles in Greek literature: Seventh-eighth centuries," in *The Byzantine and Early Islamic Near East I: Problems in the Literary Source Material* (Studies in late antiquity and early Islam, 1), edited by A. Cameron and L.I. Conrad. Princeton, New Jersey: The Darwin Press Inc. Original edition, 1992.

Crone, P.

- 2013 "Khālīd b. al-Walīd b. al-Mughīra al-Makhzūmī," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
[http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/khalid-b-al-walid-SIM\\_4149](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/khalid-b-al-walid-SIM_4149) (30 March 2013).

Donner, F.McG.

- 1981 *The Early Islamic Conquests*. Princeton, New Jersey: Princeton University Press.

- Dozeman, T.B.  
2003 "Geography and history in Herodotus and in Ezra-Nehemiah," *Journal of Biblical Literature* 122: 449–466.
- Frye, R.N.  
2013 "Ghardjistān," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
[http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/ghardjistan-SIM\\_2466](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/ghardjistan-SIM_2466) (30 March 2013).
- Greenwood, T.W.  
2008 "Armenian neighbours (600–1045)," in *The Cambridge History of the Byzantine Empire c. 500–1492*, edited by J. Shepard, pp. 333–364. Cambridge: Cambridge University Press.
- Haldon, J.  
1999 *Warfare, State and Society in the Byzantine World, 565–1204*. London: UCL Press.
- Haldon, J. and Kennedy H.  
1980 "The Arab-Byzantine frontier in the eighth and ninth centuries: Military organisation and society in the borderlands," *Zbornik Radova Vizantološkog Instituta* 19: 79–116.
- Hinds, M.  
1984 "The first Arab conquest in Fārs," in *Iran* 22: 39–53.
- Hoyland, R.G.  
1997 *Seeing Islam as Others Saw It*. Princeton, New Jersey: The Darwin Press Inc.
- Kaegi, W.E.  
1986 "The frontier: Barrier or bridge," in *The 17th International Byzantine Congress: Major Papers, Dumbarton Oaks/Georgetown University, Washington, DC, August 3–8, 1986*, pp. 279–303. New Rochelle, New York: A.D. Caratzas.  
1998 "Egypt on the eve of the Muslim conquest," in *The Cambridge History of Egypt*. Vol. 1. *Islamic Egypt, 640–1517*, edited by C.F. Petry, pp. 34–61. Cambridge: Cambridge University Press.
- Kennedy, H.  
2007 *The Great Arab Conquests: How the Spread of Islam Changed the World We Live In*. London: Weidenfeld & Nicholson.
- Knapp, A.B and Ashmore, W.  
1999 "Archaeological landscapes: constructed, conceptualized, ideational," in *Archaeologies of Landscape: Contemporary Perspectives*, edited by W. Ashmore and A.B. Knapp, pp. 1–33. Malden, Massachusetts: Blackwell Publishers Ltd.
- LeFebvre, H.  
1991 *The Production of Space*. Translated by D. Nicholson-Smith. Malden, Massachusetts: Blackwell Publishing.
- Levi Della Vida, G. and Bonner, M.  
2013 "Umar (I) b. al-Khaṭṭāb," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
[http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/umar-i-b-al-khattab-SIM\\_7707](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/umar-i-b-al-khattab-SIM_7707) (30 March 2013).



- Lewis, B.  
2013 "Abbāsids," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
[http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/abbasids-COM\\_0002](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/abbasids-COM_0002) (30 March 2013).
- O'Sullivan, S.  
2004 "Sebeos' account of an Arab attack on Constantinople," *Byzantine and Modern Greek Studies* 28: 67–88.
- Patlagean, E.  
1983 "Ancient Byzantine hagiography and social history," in *Saints and Their Cults: Studies in Religious Sociology, Folklore and History*, edited with introduction and annotated bibliography by S. Wilson. Cambridge: Cambridge University Press.
- Ramsay, W.M.  
1923 "Geography and history in a Phrygo-Pisidian glen," *The Geographical Journal* 61/4: 279–296.
- Robinson, C. F.  
2004 "The conquest of Khūzistān: A historiographical reassessment," *Bulletin of the School of Oriental and African Studies* 67/1: 14–39.
- Smitten, J. R.  
1981 "Introduction," in *Spatial Form in Narrative*, edited by J.R. Smitten and A. Daghistany with a forward by J. Frank, pp. 15–34. Ithaca: Cornell University Press.
- Van Donzel, E. and Ott, C.  
2013 "Yādjudjwa-Mādjudj," in *Encyclopaedia of Islam, Second Edition*, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs. Brill.  
[http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudj-wa-madjudj-COM\\_1353](http://referenceworks.brillonline.com.ezp.lib.unimelb.edu.au/entries/encyclopaedia-of-islam-2/yadjudj-wa-madjudj-COM_1353) (30 March 2013).
- Whittow, M.  
1996 *The Making of Orthodox Byzantium, 600–1025*. London: Macmillan.

Abby ROBINSON  
University of Melbourne  
E-mail: [abbyr@unimelb.edu.au](mailto:abbyr@unimelb.edu.au)

# The Term and Concept of *Isti'nāf* in al-Farrā's Qur'ānic Commentary and the Early Development of Arabic Grammatical Tradition

Almog KASHER

## Abstract

The concept of *isti'nāf* (also called *i'tināf* and *ibtidā'*) is used extensively in al-Farrā's commentary on the Qur'ān as an explanation for nouns in *raf'*, although according to his grammatical theory, the nouns in question require a concrete operator (e.g. their predicates). It is shown in this paper that the term *isti'nāf* has a contrastive sense in these cases, where it indicates that these nouns are not operated on by any previous constituent. Al-Farrā's use of formulae such as *raf' 'alā al-isti'nāf* is explained here by reconstructing an earlier stage, in which *isti'nāf* was indeed regarded as the sole explanation of *raf'*, based on the notion of its default status. These formulae survived in al-Farrā's time, although their meaning had altered.

## 1. Introduction

It is a well-known fact that mainstream Arab grammarians regarded *ibtidā'* as the operator (*'āmil*) assigning *raf'* to the subject of nominal sentences<sup>1</sup> (the *mubtada'*).<sup>2</sup> Sibawayhi did not define *ibtidā'* in his *al-Kitāb*, but his followers discussed this concept extensively. It has variously been defined as the noun's property of not being operated on by any literal operator, such as *inna*, and as a combination of this property with the noun being predicated of.<sup>3</sup> As for the origins of this notion, Versteegh shows that the term *isti'nāf* was used by early Qur'ānic exegetes as a "stage direction", to indicate the beginning of a new message/sentence.<sup>4</sup> He states that in Muqātil's commentary, "the use of *ista'nāfa* is determined at least partly linguistically," and that "in one instance the use of *ista'nāfa* indicates a purely syntactic caesura in the sentence."<sup>5</sup> However, generally "there is no syntactic dimension to the phenomenon in question ... but simply an awareness on the part of the commentator that there is no connection, but a break between the two parts of a verse."<sup>6</sup>

<sup>1</sup> Sentences and clauses will not be distinguished in this paper. Cf. Carter 2006.

<sup>2</sup> According to some grammarians *ibtidā'* also assigns *raf'* to the predicate, which is irrelevant for the present discussion.

<sup>3</sup> See Bohas *et al.* 1990, pp. 60, 64–65; Peled 1992, esp. pp. 146–149; 1994, *passim*; Levin 1995, pp. 221–224; Baalbaki 1999, pp. 25–27, 30; Peled 2009, pp. 6–8, 87–88. Other views will be discussed elsewhere. On Sibawayhi's concept of *ibtidā'*, see also Talmon 2003, pp. 175–176 (see also Levin 2007; this issue will be discussed in more detail elsewhere).

<sup>4</sup> Versteegh 1993, *passim*.

<sup>5</sup> Versteegh 1993, p. 134.

<sup>6</sup> Versteegh 1993, p. 136. See also Versteegh 1993, pp. 110, 117, 132–136; Carter 1994, p. 401; Talmon 2003, pp. 177–178.

However, not all grammarians adhered to this notion; that is, of *ibtidāʾ* as the operator that assigns *rafʿ* to the subject. Al-Farrāʾ, for example, has the following view regarding the operator of the subject in different syntactic structures:<sup>7</sup>

- (1) When the predicate is a noun, it assigns the *rafʿ* to the subject; in this case, the subject also assigns the *rafʿ* to the predicate. For this notion, al-Farrāʾ occasionally uses the term *rāfaʾa*, translated by Kinberg as “to mutually affect the nominative case upon (with regard to the two members of a nominal clause).”<sup>8</sup> This concept is referred to by some grammarians as *tarāfuʿ* (that is, mutual assignment of *rafʿ*).<sup>9</sup> For example, according to one parsing offered by al-Farrāʾ of the following verse (al-Raʿd, 1):

... والذي أنزل إليك من ربك الحق ...

*alladī* and *al-ḥaqqu* assign the *rafʿ* to one another (وترفع كل واحد بصاحبه).<sup>10</sup>

- (2) When the sentence consists of a noun and a prepositional phrase or a locative,<sup>11</sup> it is the preposition(al phrase) or the locative which assigns the *rafʿ* to the noun. For example, regarding the following verse (Āl ʿImrān, 15):

قل أؤمنكم بخير من ذلكم للذين اتقوا عند ربهم جنات ...

al-Farrāʾ explains the *rafʿ* in *jannātun* as due to *li-* (رفع الجنات باللام).<sup>12</sup>

- (3) When the predicate following the subject is a verb whose *fāʾil* is a pronoun referring back to the subject, this verb is the operator of the subject. For example, regarding the verse (Āl ʿImrān, 7, to be discussed below):

... والراسخون في العلم يقولون آمنا به ...

al-Farrāʾ states that *yaqūlūna* assigns the *rafʿ* to *al-rāsiḥūna* (رفعهم يقولون).<sup>13</sup>

- (4) Otherwise, the resumptive pronoun is said to affect the subject. For instance, according to one of the possible interpretations of the following verse (al-Nūr, 41):

ألم تر أن الله يسبح له من في السموات والأرض والطير صافات كل قد علم صلاته وتسبيحه ...

al-Farrāʾ says that the *rafʿ* in *kullun* is caused by the resumptive pronoun *-hu* in the last two words (ترفع كلا بما عاد إليه من ذكره وهي الهاء في صلاته وتسبيحه).<sup>14</sup>

Correspondingly, for al-Farrāʾ the term *mubtadaʾ* does not denote the nominal subject. Rather, he uses *ism* and *fiʾllḥabar* to refer to the subject and predicate, respectively, of both nominal and verbal sentences.<sup>15</sup>

<sup>7</sup> The following structures are discussed in Talmon 1993; 2003, pp. 168–173.

<sup>8</sup> Kinberg 1996, p. 310.

<sup>9</sup> See, e.g., Bohas *et al.* 1990, p. 69.

<sup>10</sup> al-Farrāʾ, *Maʾānī al-Qurʾān*, vol. 2, p. 57.

<sup>11</sup> For al-Farrāʾ, the term *ṣifa* denotes a preposition, a prepositional phrase or a locative (see Kinberg 1996, pp. 909–914).

<sup>12</sup> al-Farrāʾ, *Maʾānī al-Qurʾān*, vol. 1, p. 195.

<sup>13</sup> al-Farrāʾ, *Maʾānī al-Qurʾān*, vol. 1, p. 191.

<sup>14</sup> al-Farrāʾ, *Maʾānī al-Qurʾān*, vol. 2, p. 255.

<sup>15</sup> See Talmon 1990, pp. 272–276; Versteegh 1993, p. 135.

In a *prima facie* contradiction, however, al-Farrā' makes extensive use of the terms *isti'nāf*, *i'tināf* and *ibtidā'* in order to explain nouns (as well as verbs — see below) in *raf'*.<sup>16</sup> This apparent contradiction will be the point of departure of the present study. I will first discuss, in Section 2, al-Farrā's use of *isti'nāf* with reference to complete sentences, and then, in Section 3, its use with reference to one-term sentences; that is, single nouns in *raf'*. In these two sections I will focus on the relationship between the actual operator of the nouns in *raf'* at stake and al-Farrā's use of *isti'nāf* as an explanation of this *raf'*. I intend to show that the term *isti'nāf* has a contrastive sense in these cases, where it indicates that these nouns are not operated on by any previous constituent. In light of the findings in these two sections, I will try to reconstruct, in Section 4, the early lines of development of this concept. Al-Farrā's use of formulae such as *raf' alā al-isti'nāf* will be explained by reconstructing an earlier stage, in which *isti'nāf* was indeed regarded as the sole explanation of *raf'*, based on the notion of its default status; these formulae survived in al-Farrā's time, although their meaning had altered. In Section 5, I will tackle al-Farrā's use of *isti'nāf* with reference to imperfect verbs in *raf'*.

## 2. *Isti'nāf* and Complete Sentences

One locus where al-Farrā' uses *isti'nāf* alongside an explicit indication that the operator of the *raf'* of the subject in question is its nominal predicate is found in one of his analyses of the reading of *ayyuhum* in *raf'* in the following verse (Maryam, 69):<sup>17</sup>

ثم لنتزعن من كل شيعة أئيمهم / أئيمهم أشد على الرحمن عتيا

The reading of *ayyuhum* in *naṣb* implies, according to al-Farrā', that the verb *la-nanzi'anna* affects this constituent; that is, it is the verb's object. In contrast, the reading *ayyuhum* in *raf'* implies that *ayy* is not affected by the verb *la-nanzi'anna*; the prepositional phrase *min kulli šī'atin*, instead, fulfils the verb's requirement for a complement. As for the following stretch of speech, one of al-Farrā's explanations is introduced by the statement: ثم تستأنف أيا فترفعها بالذي بعدها.<sup>18</sup> Two points should be noted here. First, *isti'nāf* is used in a contrastive sense; that is, it implies that the stretch of speech in question is not syntactically connected to what precedes it, in contrast with the parsing above, where its *naṣb* is explained by the preceding verb.<sup>19</sup> Second, although al-Farrā' states that *ayy* is in the state of *isti'nāf*, what assigns it the *raf'* is not the *isti'nāf*

<sup>16</sup> Two remarks are in order here. (1) The terms *isti'nāf*, *i'tināf* and *ibtidā'* are, to a certain extent, interchangeable in al-Farrā's book. See Kinberg 1996, pp. 28–37, 49–53; and (2) the term *isti'nāf* is also used there in a less strict sense, with no reference to any *raf'* (e.g. al-Farrā, *Ma'ānī al-Qur'ān*, vol. 3, p. 121; see also Talmon 2003, p. 174). However, this, in itself, by no means indicates that *isti'nāf* was not regarded as an operator, since it is, in fact, used extensively in a specialised sense with reference to *raf'*, as I hope to show here. Incidentally, Sibawayhi, who does regard *ibtidā'* as an operator, uses this term in a less strict sense as well. See Peled 1992, pp. 159–168; Versteegh 1993, pp. 135–136; Talmon 2003, pp. 173–174, 175 n. 3.

<sup>17</sup> See 'Umar and Makram 1988, vol. 4, p. 54.

<sup>18</sup> al-Farrā, *Ma'ānī al-Qur'ān*, vol. 1, pp. 46–48.

<sup>19</sup> On the contrastive sense of *isti'nāf*, see also Versteegh 1993, p. 135; Talmon 2003, pp. 174–175. Note, however, that the correlation *raf' — isti'nāf* vs. *non-raf' — ittiṣāl ittibā'* is not as clear-cut as one might infer from Talmon (2003, p. 174). For one thing, *raf'* due to *isti'nāf* is also contrasted with *raf'* explained by syntactic relationships with the previous stretch of speech.

itself, but rather the next constituent, viz. its predicate. The implication from the text is that according to this parsing, *ayyuhum ... 'itiyyan* forms an indirect question.<sup>20</sup>

This also applies where the predicate, following the subject, is a verb whose *fā'il* is a pronoun referring back to the subject (Āl 'Imrān, 7):

... وما يعلم تأويله إلا الله والراسخون في العلم يقولون آمنا به ...

Al-Farrā' states: *ثم استأنف والراسخون فرفعهم بيقولون لا يأتباعهم إعراب الله*.<sup>21</sup> That is, the *raf'* of *al-rāsikhūna* is here not considered as being due to this noun being coordinated with *allāhu*,<sup>22</sup> but to the fact that it introduces a new sentence. However, this state of *isti'nāf* does not assign the case; it is its predicate, *yaqūlūna*, which does.<sup>23</sup>

### 3. *Isti'nāf* and One-Term Sentences

So far, we have seen instances where *isti'nāf* is mentioned with respect to the *raf'* of subjects in complete sentences. Al-Farrā', however, also uses this concept very frequently in reference to one-term sentences; that is, single nouns in *raf'*. These cases, as we shall see below, are of special importance for the present discussion.<sup>24</sup> A common practice of al-Farrā' is to parse the noun in question as the predicate, and to restore a personal or demonstrative pronoun as its subject. One of the verses most frequently used by al-Farrā' as an illustration in such cases is (al-Aḥqāf, 35):

... لم يلبثوا إلا ساعة من نهار بلاغ ...

The *raf'* in this case is explained by al-Farrā' laconically as *bi-l-isti'nāf*, with no further elaboration.<sup>25</sup> However, al-Farrā''s discussions elsewhere make it clear that an underlying subject is to be posited here. This can be seen, for instance, in al-Farrā''s commentary on the following verse (Yūnus, 23):<sup>26</sup>

... يأيها الناس إنما بغيكم متاع / متاع الحياة الدنيا ...

According to one possible parsing, *'alā anfusikum* is the predicate of *bağyukum*, so that *matā'* takes the *naṣb*. Against this, the *raf'* is possible here *'alā al-isti'nāf* (note the contrastive sense), just like the *raf'* of *balāğ* in the verse above, both being explained here by positing an underlying subject: *أي ذلك بلاغ وذلك متاع الحياة الدنيا*. Incidentally, according to yet another parsing, *matā'* takes the *raf'* as the predicate of *bağyukum*.<sup>27</sup>

<sup>20</sup> See Ibn Hišām, *Muğnī al-labīb 'an kutub al-a'arīb*, vol. 1, pp. 512–520 for various parsings of this verse.

<sup>21</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, p. 191.

<sup>22</sup> On *itbā'* see Kinberg 1996, pp. 64–70. Kinberg (1996, p. 65) translates *atba'a* as: "to make one member follow a preceding one in (1. case: by coordination; apposition; as its attribute; by attraction; ...)".

<sup>23</sup> See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 2, p. 78.

<sup>24</sup> *Isti'nāf* with reference to one-term sentences is noted in Kinberg 1991, pp. 240, 243. These constructions are discussed in Reckendorf 1895, §116; 1977, §176. On one-term sentences in modern written Arabic, see Badawi *et al.* 2004, pp. 329, 348.

<sup>25</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, p. 57.

<sup>26</sup> See 'Umar and Makram 1988, vol. 3, pp. 67–68.

<sup>27</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, p. 461. See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, pp. 398, 472; vol. 2, pp. 260, 316, 345, 372.

Elsewhere this underlying pronoun is mentioned explicitly as the operator assigning the *raf*<sup>°</sup> to *balāḡ*. This is found, for example, in al-Farrā's commentary on the following verse, which follows a series of verses describing Creation (al-Nāzi'āt, 33):

متاعا لكم ولأنعامكم

After explaining the *naṣb*, al-Farrā' discusses the hypothetical reading in *raf*<sup>°</sup>; that is, *matā'Un*,<sup>28</sup> which he analogises, *inter alia*, with *balāḡun*, asserting: وهو على الاستئناف يضم له ما يرفعه.<sup>29</sup>

The two features of *isti'nāf* as an explanation for the assignment of *raf*<sup>°</sup> are prominent here: it is used in a contrastive sense, and the constituent in *raf*<sup>°</sup> needs an operator, since *isti'nāf* does not function as an operator by itself. Note, however, that in his commentary on *balāḡun*, al-Farrā' restricts himself to the explanation *bi-l-isti'nāf*, and it is only from other loci in his commentary that we learn his full explanation of this verse. *isti'nāf* as the *sole* explanation of *raf*<sup>°</sup> in nouns is indeed very common in this commentary. One such case is al-Farrā's discussion of the *raf*<sup>°</sup> in the following verse (Qāf, 23):

... هذا ما لدي عتيد

*'atīd* can be parsed here as the predicate; alternatively, it can be analysed as *musta'naf*.<sup>30</sup> No further explanation is given as to the operator assigning the *raf*<sup>°</sup> to *'atīd*, either here or anywhere else in this treatise.<sup>31</sup> Elsewhere, *'alā al-isti'nāf*, regarding this verse (and others), is contrasted with *al-waṣl*; that is, connection with the previous stretch of speech,<sup>32</sup> which would result in *naṣb* of *'atīd*.<sup>33</sup> *isti'nāf* is also contrasted with *itbā'*,<sup>34</sup> for example in al-Farrā's remark regarding the following pair of verses (al-Šaffāt, 125–126):<sup>35</sup>

... وتذرون أحسن الخالقين \* الله ربكم / الله ربكم ...

That is, beside agreement, with respect to case, of *allāha rabbakum* with *aḥsana l-bāliqīna*, as a consequence of *itbā'*, *isti'nāf* is also possible, resulting in *raf*<sup>°</sup>.<sup>36</sup>

Sometimes such a noun in *raf*<sup>°</sup> is considered a *tafsīr*<sup>37</sup> of a previous noun. For example, regarding the following verse (Ṭāhā, 29–30):<sup>38</sup>

واجعل لي وزيرا من أهلي \* هارون / هارون أخي

<sup>28</sup> This reading is indeed not mentioned in 'Umar and Makram 1988, vol. 8, p. 63.

<sup>29</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, p. 233. See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, pp. 101, 472; vol. 2, p. 260; vol. 3, p. 238.

<sup>30</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, p. 82. Incidentally, an explanation is also provided for *'atīdan* in *naṣb*. See 'Umar and Makram 1988, vol. 6, p. 234.

<sup>31</sup> See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, p. 104.

<sup>32</sup> Kinberg (1996, p. 922) defines *waṣl* as "connecting, connection (of an utterance with a preceding one: either syntactically or phonologically, as opposed to an utterance which is resumed after a pause)".

<sup>33</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, pp. 16–17.

<sup>34</sup> See above.

<sup>35</sup> See 'Umar and Makram 1988, vol. 5, p. 246.

<sup>36</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 3, p. 198. See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, p. 16; vol. 2, p. 193.

<sup>37</sup> See Kinberg 1996, pp. 555–563. He translates *tafsīr* as "specification (the term covers a wide range of constructions: ... 2. a nominative noun representing an elliptical circumstantial clause; ...)" (pp. 557–558).

<sup>38</sup> This is not mentioned in 'Umar and Makram 1988, vol. 4, p. 79.



al-Farrā' states that *hārūn* can take the *naṣb*, in agreement with *wazīran*.<sup>39</sup> Alternatively, it can take the *rafʿ*: *al-rafʿ ʿalā al-iʿtināf*, as it is a definite noun which is *mufasssir* of an indefinite noun.<sup>40</sup>

In another discussion where the verb *fāssara* is used in this sense, al-Farrā' formulates a nearly universal rule regarding the possibility of a shift from *ḥāl* in constructions such as رأيت القوم قائما وقاعدا — where the *naṣb* is explained by the phrase *al-naṣb ʿalā al-ittiṣāl bi-mā qablahu*<sup>41</sup> — to *al-rafʿ ʿalā al-ibtidāʾ* (*istiʿnāf* is also used in this discussion).<sup>42</sup>

Another general statement is found in this commentary regarding the frequency in the Qurʾān of single nouns whose pronominal subjects are covert. After positing an underlying pronoun *huwa* as the subject, in order to explain the *rafʿ* of *qurratu ʿaynin* in the verse (al-Qaṣaṣ, 9):

وقالت امرأت فرعون قرت عين لي ولك ...

al-Farrā' states: ومثله في القرآن كثير يرفع بالضمير.<sup>43</sup>

Another explanation which al-Farrā' gives of the *rafʿ* in one-term sentences is that this case is the result of the effect exerted by an underlying preposition(al phrase). This is found, for instance, in al-Farrā''s discussion of the following verse (Ṣād, 57):

هذا فليذوقه حميمٌ وغساقٌ

In one parsing *ḥamīmūn wa-ḡassāqūn* constitutes the predicate of *hādā*, but according to another it is regarded as *mustaʿnaf* so that the preceding stretch of speech is self-sufficient (*muktafī* — it does not need *ḥamīmūn wa-ḡassāqūn* in order to be complete<sup>44</sup>), as if it were followed by: منه حميم.<sup>45</sup>

#### 4. Historical Reconstruction

The frequency in this treatise of cases in which *istiʿnāf* is mentioned as the (sometimes sole) explanation of the *rafʿ*, and especially al-Farrā''s frequent use of the formula *rafʿ ʿalā al-istiʿnāf*,<sup>46</sup>

<sup>39</sup> al-Farrā' here uses both the terms *mutarjim* and *takrīr*. On *mutarjim* "explicator", see Kinberg 1992; 1996, p. 70. On *takrīr* "apposition" see Kinberg 1996, pp. 691–693 (Versteegh [1993, p. 5] translates: "substitute").

<sup>40</sup> al-Farrā', *Maʿānī al-Qurʾān*, vol. 2, p. 178. See Talmon 2003, p. 193 n. 5. See also al-Farrā', *Maʿānī al-Qurʾān*, vol. 2, p. 230; vol. 3, p. 104. Elsewhere (al-Farrā', *Maʿānī al-Qurʾān*, vol. 2, p. 407) the *rafʿ* in such constructions is explained by *ʿalā al-ibtidāʾ*, in contrast with agreement with a previous noun, with respect to case.

<sup>41</sup> On *ittiṣāl* "connecting", see Kinberg 1991, p. 239; 1996, p. 933.

<sup>42</sup> al-Farrā', *Maʿānī al-Qurʾān*, vol. 1, pp. 192–194.

<sup>43</sup> al-Farrā', *Maʿānī al-Qurʾān*, vol. 2, p. 302 (note that *damīr* here seems to denote "a suppressed element," rather than "a personal pronoun" [see Kinberg 1996, pp. 434–436], as al-Farrā' also explains the *rafʿ* here as *bi-idmār huwa*, where *idmār* means "suppression"). See also al-Farrā', *Maʿānī al-Qurʾān*, vol. 1, pp. 38–40, 420, 425; vol. 2, pp. 401–402.

<sup>44</sup> See Kinberg 1996, pp. 704–707.

<sup>45</sup> al-Farrā', *Maʿānī al-Qurʾān*, vol. 2, p. 410. Note, however, that the poetic verse adduced by al-Farrā' in this discussion appears also in al-Farrā', *Maʿānī al-Qurʾān*, vol. 3, p. 68, where the solution given to a similar syntactic problem is to restore the subject *baʿḍukum*, not a prepositional phrase.

<sup>46</sup> See Kinberg 1996, pp. 297–298. Less frequent are *rafʿ ʿalā al-iʿtināf* (Kinberg 1996, p. 297) and *rafʿ ʿalā al-ibtidāʾ* (Kinberg 1996, p. 298).

is of great significance for our understanding of the early development of the concept of *ibtidā'* / *isti'nāf*. In very broad lines, the extant sources furnish the following three usages:

- (1) Early exegetical use of *isti'nāf*, mentioned above
- (2) Al-Farrā's use of *isti'nāf* (also: *i'tināf* and *ibtidā'*), as portrayed here
- (3) Use of *ibtidā'* by the mainstream of Arab grammarians, as an operator assigning *raf'* to the subject in nominal sentences (see above)

Extant sources, especially al-Farrā's Qur'ānic commentary, enable us to reconstruct a possible missing link between the early exegetes and al-Farrā'. It is rather unlikely that the recurrent formula *raf' alā al-isti'nāf* was coined by a scholar having the *tarāfu'* notion in mind. A far more plausible possibility is that earlier scholars, probably possessing no elaborate theory of grammatical operation (such as *tarāfu'*), used the phrase *raf' alā al-isti'nāf* in order to explain the *raf'* of nouns after a break in the stretch of speech. Such a formula could easily have been based on an intuitive notion of the default status of the *raf'*; that is, that nouns in *raf'* need no explanation, in contrast to nouns in *naṣb* and *jarr*.<sup>47</sup> *isti'nāf*, in this framework, implies barring any syntactical relationships between the noun in question and the stretch of speech preceding the *isti'nāf*. Al-Farrā', in his turn, did have an elaborate theory of grammatical operation, as portrayed above, and nevertheless used the formula *raf' alā al-isti'nāf*. He probably did so since he found it useful, at least partly due to the fact that in his *Ma'ānī al-Qur'ān* he was analysing a text,<sup>48</sup> but instead of functioning as the sole explanation for the *raf'*, it was now used only in a contrastive sense.

The following paragraph in the commentary seems to corroborate this conclusion. Here al-Farrā' discusses the verses (al-Naḥl, 30–31):

...ولنعم دار المتقين \* جنات عدن يدخلونها ...

After mentioning the possibility that this *raf'* is affected by *nī'ma*, the text regarding two other possible parsings reads: ثم تستأنف الجنات فيكون رفعها على الاستئناف وإن شئت رفعتها بما عاد من ذكرها في يدخلونها.<sup>49</sup> That is, two further explanations are given here to the *raf'*: *alā al-isti'nāf* vs. the effect of the resumptive pronoun *-hā* (in *yadhūlūnahā*). What this contrast implies is that the operator of *jannāt* in the first parsing is *not* this resumptive pronoun. Judging from what we have seen so far, it is not impossible that al-Farrā' means that a pronoun should be restored here as the subject; that is: [هي] جنات عدن يدخلونها (yadhūlūnahā thus also constituting a new sentence).<sup>50</sup>

<sup>47</sup> This notion, of the default status of the *raf'* in early grammatical thought, will be discussed in detail elsewhere.

<sup>48</sup> On the rather loose correlation between *isti'nāf* and the beginning of a new verse, see, e.g., al-Farrā', *Ma'ānī al-Qur'ān*, vol. 1, p. 16.

<sup>49</sup> al-Farrā', *Ma'ānī al-Qur'ān*, vol. 2, p. 99.

<sup>50</sup> Kinberg (1991, p. 243) in his discussion of this passage only mentions the second option as an "elliptic clause", without suggesting any reconstruction. See also al-Farrā', *Ma'ānī al-Qur'ān*, vol. 2, p. 77, where *isti'nāf* resulting in *raf'* is contrasted with *radd* resulting in *naṣb* (on *radd*, with respect to agreement, see Kinberg 1996, pp. 280–288). Al-Farrā' then states that the *raf'* can be due to either *ibtidā'* or the resumptive pronoun (in *naṣb*) in the predicate. This is one of the cases Talmon (2003, p. 175) adduces for his assertion that "Farrā' does not consider their [sc. *ibtidā'* and *isti'nāf*] role *qua* syntactic positions as a sole determinant of the *i'rāb* mark of the nominal identified by them. First, the nominal may be governed by its resumptive pronoun which resides in its predicate ...," the second point being the contrastive sense of *isti'nāf*. By "sole determinant", Talmon probably meant that, while *isti'nāf* can be the determinant of the *raf'* in nominal subjects there also exists an alternative explanation, not that the other explanation complements *isti'nāf*. This

If this is indeed the case, it is not implausible that an earlier usage is reflected here; that is, *rafʿ* *ʿalā al-istiʿnāf* as the sole explanation of the *rafʿ* case of single nouns. This point will be elaborated below.<sup>51</sup>

### 5. *Istiʿnāf* and Imperfect Verbs

*istiʿnāf* is also used by al-Farrāʾ as an explanation of *rafʿ* in imperfect verbs.<sup>52</sup> Here, too, *istiʿnāf* is extensively used in a contrastive sense. For example, regarding the following verse (Āl ʿImrān, 29):

قل إن تخفوا ما في صدوركم أو تبدوه يعلمه الله ويعلم ما في السموات وما في الأرض ...

al-Farrāʾ says that whereas *yaʿlamhu* takes the *jazm* as the apodosis, the *rafʿ* of *wa-yaʿlamu* is *ʿalā al-istiʿnāf*.<sup>53</sup> The contrastive sense is manifest here: *rafʿ* explained by *ʿalā al-istiʿnāf* is contrasted with *jazm* explained by *ʿalā al-jazāʾ*; had it not been the case that a break occurs in the stretch of speech before *wa-yaʿlamu*, this verb would have also taken the *jazm*, as a conjunct of *yaʿlamhu*.

Al-Farrāʾs commentary on the following verse makes this contrastive sense explicit (Ibrāhīm, 4):

وما أرسلنا من رسول إلا بلسان قومه ليبين لهم فيضل الله من يشاء ...

The explanation of the *rafʿ* is premised on the assertion that the intention here is of *al-istiʿnāf*, in contrast to *al-ʿatf ʿalā mā qablahu*; that is, coordination with [*li-*]yubayyina (in which case the verb would have taken the *naṣb*).<sup>54</sup>

The text of this commentary provides no further information as to the operator of the *rafʿ* in verbs; al-Farrāʾs use of *istiʿnāf* with regard to nouns — that is, as designating a break in the stretch of speech, in contrast with another, possible or merely hypothetical, parsing, but without any implication as to the actual operator — does not warrant the conclusion that he considered *istiʿnāf* to be the operator of the verb. However, as with nouns, it does seem safe to conclude that *rafʿ ʿalā al-istiʿnāf* reflects an early stage, when the *rafʿ* was deemed the default case/mood, so that the state of *istiʿnāf* was a sufficient explanation for the *rafʿ*. Indeed, Sibawayhi rejects an anonymous opinion to the effect that verbs take the *rafʿ* due to *ibtidāʾ*,<sup>55</sup> and it is plausible that this

can be inferred from the fact that in the other two loci adduced by him there is no mention at all of *istiʿnāf*, only of explanations by dint of the resumptive pronoun, which does not make much sense for the second option. See also Talmon's (2003, p. 177) discussion of Abū ʿUbayda's concept of *ibtidāʾ*. At any rate, according to our conclusion, *istiʿnāf*, for al-Farrāʾ, does not determine the *rafʿ* at all.

<sup>51</sup> Although *tumma tastaʿnifu* is directly connected in this text only to the first option, it may be regarded also as an "introduction" applying to both, only designating a break in the stretch of speech, in contrast with the parsing of *jannāt* as affected by the verb. If this is indeed the case, it corroborates our suggestion that *rafʿ ʿalā al-istiʿnāf* has become in al-Farrāʾs time a formula.

<sup>52</sup> See Kinberg 1991, p. 240; Versteegh 1993, p. 135.

<sup>53</sup> al-Farrāʾ, *Maʿānī al-Qurʾān*, vol. 1, p. 206.

<sup>54</sup> al-Farrāʾ, *Maʿānī al-Qurʾān*, vol. 2, pp. 67–68. On *ʿatf* see Versteegh 1993, p. 135; Kinberg 1996, pp. 485–490. *istaʿnāfahu* is also contrasted here with *naṣaqtahu* (also meaning coordination, see Kinberg 1996, p. 792–795). *mustaʿnāf* is also contrasted with *mardūda* — see, e.g., al-Farrāʾ, *Maʿānī al-Qurʾān*, vol. 3, p. 223 (on this term see above). For *ʿalā al-ibtidāʾ* (see above) resulting in *rafʿ*, see al-Farrāʾ, *Maʿānī al-Qurʾān*, vol. 2, p. 351.

<sup>55</sup> Sibawayhi, *Kitāb*, vol. 1, p. 364.

anonymous opinion was akin to — if not identical with — the view of the scholars who we assume here to have been al-Farrā's predecessors.<sup>56</sup>

The default status of *raf* is commensurate with the theory attributed to Kūfan grammarians, and specifically to al-Farrā, by later grammarians: it is claimed that, for them, the operator of the *raf* in verbs is the lack of operators of *naṣb* and *jazm*.<sup>57</sup> Unfortunately, there is no contemporary textual evidence to support or refute this claim.<sup>58</sup>

## 6. Conclusion

We are now in a position to try to sketch the early lines of development of the notion of *isti'nāf*:

- (1) Early exegetes used *isti'nāf* as a “stage direction”, in order to indicate the beginning of a new message/sentence, as mentioned above.
- (2) Early scholars with more interest in grammar, and specifically with *i'rāb*, made use of the concept of *isti'nāf* in order to explain nouns and verbs in *raf*. With the notion of the default status of the *raf* in mind, a break in the stretch of speech implies directly that the next noun or verb takes the *raf*. These scholars made use of formulae such as *raf* 'alā *al-isti'nāf*, but not necessarily with a fully fledged theory of syntactic operation ('amal).
- (3) Arab mainstream grammarians adopted the concept of *isti'nāf* as explanation for the *raf*. *ibtidā'* was regarded by them as an operator, partaking in a fully fledged theory of 'amal. However, *isti'nāf* and *ibtidā'* continued to be used also in the more literal sense, in order to mark the beginning of a sentence (see above). As for the imperfect verb, the mainstream of grammarians held that the operator assigning it the *raf* is its filling nominal positions; I try to show elsewhere that this operator was originally based also on the notion of the default status of the *raf*. Here, too, grammarians kept using the terms *ibtidā'* and *isti'nāf* in its more literal sense, viz. to indicate the beginning of a sentence.
- (4) al-Farrā adhered to a well-developed theory of syntactic operation regarding nouns in *raf* (e.g. *tarāfu*). On the other hand, the concept of *isti'nāf* was still useful in his analysis of the Qur'ānic text. However, the formula *raf* 'alā *al-isti'nāf* ceased to be taken at face value, as *isti'nāf* was not regarded as a sufficient explanation of the *raf*, but only in a contrastive sense: since nothing in the previous stretch of speech can affect the noun in question, it is free to take the *raf* as a result of a syntactic effect of one of the constituents in the new sentence. As for verbs in *raf*, this formula is also used in a contrastive sense, yet we have no information as to the actual operator assigning *raf* to verbs.

<sup>56</sup> This issue will be discussed in detail elsewhere. Talmon (2003, p. 177) argues that the anonymous scholars have al-Farrā's concept of *ibtidā'* in mind, not Sibawayhi's; he also equates al-Farrā's concept of *ibtidā'* with “absence of *nāṣib* or *ḡāzim*” (one of the views to which al-Aḥfaṣ allegedly adhered — I discuss this interpretation of al-Aḥfaṣ elsewhere). This is, however, not the case: *ibtidā'* / *isti'nāf*, for al-Farrā, at least when applied to nouns (Talmon's discussion here regards the *ibtidā'* concept in general, and is not restricted to verbs), does not mean lack of operators; rather, it implies that the constituent in question is not affected by any operator in the preceding stretch of speech. In the case of nouns, at least, the noun in question is affected by some other operator.

<sup>57</sup> See, e.g., Ibn al-Anbārī, *Kitāb al-Inṣāf fi masā'il al-hilāf bayna al-naḥwiyyīna l-baṣriyyīna wa-l-kūfiyyīna*, pp. 226–228.

<sup>58</sup> This *Streitfrage* does not appear in Baalbaki's (1981) list of those for which he found evidence in early writings.

Three final remarks are in order:

- (1) It is still unclear whether *ibtidā'* and *isti'nāf* (and *i'tināf*) had different origins. It was stated above that they are partly interchangeable in al-Farrā'. It is beyond the scope of this article to examine the different uses of these terms, but there is one usage of *ibtidā'* worth mentioning here. This term is utilised by al-Farrā' not only in the sense of the beginning of a sentence, as against connection with the previous one, but also in the sense of precedence, with respect to the internal order of constituents within one sentence.<sup>59</sup> Thus, beside the notion of the beginning of the sentence discussed here, the notion of internal precedence may also have constituted a historical predecessor in the development of the later mainstream grammarians' *ibtidā'*. Needless to say, the exact lines of the early development of this term are still impossible to reconstruct.
- (2) According to Talmon, al-Farrā' was a loyal adherent of the so-called Old Iraqi School, comprising both Baṣran and Kūfan grammarians, whereas al-Ḥalīl and Sībawayhi developed innovative approaches.<sup>60</sup> This view applies, *inter alia*, to the concept of *ibtidā'*: according to Talmon, the Old Iraqi School adhered to the *tarāfu'* theory, whereas the Sībawayhian *ibtidā'* concept was an innovation, differing from the *isti'nāf* concept as it is found in al-Farrā', for example.<sup>61</sup> But this theory suffers from a serious weakness: there is no evidence that the *tarāfu'* theory was adhered to by pre-Sībawayhian grammarians.<sup>62</sup> If our conclusion from the present study is correct — that is, that al-Farrā's use of *raf' alā al-isti'nāf* reflects an early view — we can draw a line of historical development between early exegetes and grammarians of the mainstream, with regard to *isti'nāf*/*ibtidā'*, as portrayed above.
- (3) However, there may have been a crucial difference between the early (reconstructed) view of *raf' alā al-isti'nāf* and the later concept of *ibtidā'*. We raised the possibility above that *raf' alā al-isti'nāf* was used by early scholars as an explanation of (*inter alia*) single nouns in *raf'*, without taking the internal syntactic structure of the following stretch of speech into consideration. This would seem to indicate a lack of any comprehensive view of predication in the minds of these scholars. Sībawayhi's concept of *ibtidā'*, on the other hand, does depend on such a framework. In other words, both Sībawayhi's and al-Farrā's syntactic theories depend on a theory of predication, which — according to the possibility raised here — was introduced later than the notion of *raf' alā al-isti'nāf*, being indifferent to the following syntactic structure.<sup>63</sup> The concept of predication thus behaves as a "superstratum" vis-à-vis the "substratum" of *raf' alā al-isti'nāf*, and Sībawayhi and al-Farrā' present two different ways to integrate them.

<sup>59</sup> Talmon 1990, pp. 274–275.

<sup>60</sup> The theory of "Old Iraqi School" was developed in many of Talmon's studies, culminating in Talmon 2003. For criticisms of this theory, see Versteegh 2005; Baalbaki 2005; Carter 2008. See also Kinberg 1996, Introduction, pp. 9–17.

<sup>61</sup> Talmon 2003, pp. 168–178, 294–295.

<sup>62</sup> See Talmon 2003, pp. 168–169.

<sup>63</sup> Nothing has been said here regarding a possible foreign influence on early Arabic grammar. Indeed, the data examined here neither corroborate nor refute this possibility. That is, it *could* be the case that the introduction of the concept of predication, following the "*raf' alā al-isti'nāf* scholars", was made due to foreign influence.

## Bibliography

### Primary Sources

- al-Farrā', Abū Zakariyyā Yaḥyā ibn Ziyād  
 1980 *Ma'ānī al-Qur'ān*, Vol. 1, edited by A. Y. Najātī and M. 'A. al-Najjār, 2nd ed. Cairo: al-Hay'a al-Miṣriyya al-'Āmma li-l-Kitāb.  
 n.d. *Ma'ānī al-Qur'ān*, Vol. 2, edited by M. 'A. al-Najjār. Cairo: al-Dār al-Miṣriyya li-l-Ta'lif wa-l-Tarjama.  
 1972 *Ma'ānī al-Qur'ān*, Vol. 3, edited by 'A. I. Ṣalabī. Cairo: al-Hay'a al-Miṣriyya al-'Āmma li-l-Kitāb.
- Ibn al-Anbārī, Kamāl al-Dīn Abū al-Barakāt 'Abd al-Raḥmān ibn Muḥammad ibn Abī Sa'īd al-Anbārī  
 1913 *Kitāb al-Inṣāf fī masā'il al-ḥilāf bayna al-naḥwiyyīna al-baṣriyyīna wa-l-kūfiyyīna*, edited by G. Weil. Leiden: Brill.
- Ibn Hišām  
 2000–2002 *Muḡnī al-labīb 'an kutub al-a'arīb*, edited by 'A. M. al-Ḥaṭīb, 7 vols. Kuwait: al-Majlis al-Waṭanī li-l-Ṭaqqāfa wa-l-Funūn wa-l-Ādāb, al-Turāt al-'Arabī.
- Sībawayhi  
 1881–1889 *Kitāb Sībawayhi*, edited by H. Derenbourg, 2 vols. Paris: Imprimerie Nationale.

### Secondary Sources

- Baalbaki, R.  
 1981 "Arab grammatical controversies and the extant sources of the second and third centuries A.H.," in *Studia Arabica et Islamica: Festschrift for Ihsan 'Abbas on his Sixtieth Birthday*, edited by W. al-Qāḍī, pp. 1–26. Beirut: American University of Beirut.
- 1999 "Expanding the *ma'nawī 'awāmil*: Suhaylī's innovative approach to the theory of regimen," *Al-Abḥath* 47: 23–58.
- 2005 Review of *Eighth-Century Iraqi Grammar: A Critical Exploration of Pre-Ḥalīlian Arabic Linguistics* (Winona Lake: Eisenbrauns), by R. Talmon. *Journal of Semitic Studies* 50: 413–416.
- Badawi, E., Carter, M. G. and Gully, A.  
 2004 *Modern Written Arabic: A Comprehensive Grammar*. London: Routledge.
- Bohas, G., Guillaume, J.-P. and Kouloughli, D. E.  
 1990 *The Arabic Linguistic Tradition*. London: Routledge.
- Carter, M. G.  
 1994 "Writing the history of Arabic grammar," *Historiographia Linguistica* 21: 385–414.
- 2006 "Approaches to the technical terms of Arabic grammar," in *Authority, Privacy and Public Order in Islam: Proceedings of the 22<sup>nd</sup> Congress of L'Union Européenne des Arabisants et Islamisants*, edited by B. Michalak-Pikulska and A. Pikulski, pp. 459–467. Leuven: Peeters.
- 2008 Review of *Eighth-Century Iraqi Grammar: A Critical Exploration of Pre-Ḥalīlian Arabic Linguistics* (Winona Lake: Eisenbrauns), by R. Talmon. *Bibliotheca Orientalis* 65: 499–503.
- Kinberg, N.  
 1991 "'Clause' and 'Sentence' in *Ma'ānī l-Qur'ān* by al-Farrā': A study of the term *kalām*," in *Proceedings of the Colloquium on Arabic Grammar, Budapest, 1–7 September 1991* (Arabist, 3–4), edited by K. Dévényi and T. Iványi, pp. 239–246. Budapest: Eötvös Loránd University Chair for Arabic Studies.



- 1992 "Al-Farrā's grammatical terminology – an examination of the Kūfic term mutarjim and the Baṣrian badal," in *Proceedings of the XXXII International Congress for Asian and North African Studies, Hamburg, 25th–30th August 1986*, edited by A. Wezler and E. Hammerschmidt, p. 470. Stuttgart: Franz Steiner.
- 1996 *A Lexicon of al-Farrā's Terminology in his Qur'ān Commentary: With Full Definitions, English Summaries and Extensive Citations*. Leiden: Brill.
- Levin, A.  
 1995 "The fundamental principles of the Arab grammarians' theory of 'amal," *Jerusalem Studies in Arabic and Islam* 19: 214–232.  
 2007 "Sibawayhi's view of *al-mubtada'* and *al-ibtidā'*," in *Sha'arei Lashon: Studies in Hebrew, Aramaic and Jewish Languages Presented to Moshe Bar-Asher*, edited by A. Maman, S. E. Fassberg and Y. Breuer, Vol. 3, pp. \*78–\*101. Jerusalem: The Bialik Institute.
- Peled, Y.  
 1992 "'Amal and 'ibtidā' in medieval Arabic grammatical tradition," *Abr-Nahrain* 30: 146–171.  
 1994 "Aspects of case assignment in medieval Arabic grammatical theory," *Wiener Zeitschrift für die Kunde des Morgenlandes* 84: 133–158.  
 2009 *Sentence Types and Word-Order Patterns in Written Arabic: Medieval and Modern Perspectives*. Leiden: Brill.
- Reckendorf, H.  
 1895 *Die syntaktischen Verhältnisse des Arabischen*. Leiden: Brill.  
 1977 *Arabische Syntax*. Heidelberg: Carl Winter.
- Talmon, R.  
 1990 "The philosophizing Farrā': An interpretation of an obscure saying attributed to the grammarian Ta'lab," in *Studies in the History of Arabic Grammar II: Proceedings of the 2nd Symposium on the History of Arabic Grammar, Nijmegen, 27 April – 1 May 1987*, edited by K. Versteegh and M. G. Carter, pp. 265–279. Amsterdam: John Benjamins.  
 1993 "Two early 'non-Sibawaihi' views of 'amal in kernel-sentences," *Zeitschrift für Arabische Linguistik* 25: 278–288.  
 2003 *Eighth-Century Iraqi Grammar: A Critical Exploration of Pre-Ḥalilian Arabic Linguistics*. Winona Lake: Eisenbrauns.
- 'Umar, A. M. and Makram, 'A. S.  
 1988 *Mu'jam al-qirā'āt al-qur'āniyya*, 2nd ed. Kuwait: Jāmi'at al-Kuwayt.
- Versteegh, C. H. M.  
 1993 *Arabic Grammar and Qur'ānic Exegesis in Early Islam*. Leiden: Brill.  
 2005 Review of *Eighth-Century Iraqi Grammar: A Critical Exploration of Pre-Ḥalilian Arabic Linguistics* (Winona Lake: Eisenbrauns), by R. Talmon. *Jerusalem Studies in Arabic and Islam* 30: 528–535.

Almog KASHER  
 Bar-Ilan University, Israel  
 E-mail: almogk@gmail.com

# Further Notes on the Doxology Adam: The Hymn of the Seven Tunes

Youhanna Nessim YOUSSEF

## Abstract

*This article is a study of a Coptic hymn published for the first time in the eighteenth century. We argue that this hymn was composed in the Monastery of Saint Macarius, during the period when the patriarchs were chosen from this monastery.*

## Introduction

The Doxology Adam<sup>1</sup> is mentioned in Ibn Kabar, where he notices that for the feast of the resurrection this hymn is sung with the long tune and without details.<sup>2</sup>

This text was published for the first time by R. Tukhi<sup>3</sup> in his *Psalmodia* but, as expected, he omitted the name of Macarius of Tkow, who was an antichalcedonian bishop, hence replacing “the three Macarii” with “Abba Macarius and Macarius”:<sup>4</sup>

χερε πχορος τηρη `ντε νιμαρτυρος χερε αββα αντωνι νεμ αββα μακαριος  
κεμακαριος

*Hail to the whole choir, of the martyrs, Hail to Abba Antony and Abba Macarius and Macarius<sup>5</sup>*

It is known that the third Macarius is the bishop of Tkow, who opposed the Council of Chalcedon.<sup>6</sup>

The first edition of the Coptic Orthodox Church, *Psalmodia*'s to respect the manuscript text was edited by Mina al-Baramûsî.<sup>7</sup>

The actual hymn is called the Seven Tunes:

- 1- Amazingly enough, we find the tunes are taken from back to front; that is, after special tunes for the first four stanzas
- 2- Followed by a tune from the hymn ΠΙΩΙΚ (the hymn of Partaking of the Communion)

<sup>1</sup> For the doxologies in general, cf. Abd-al-Masih 1938, pp. 97–113; 1939, pp. 175–191; 1940, pp. 19–76; 1942, pp. 31–61; 1945, pp. 95–158.

<sup>2</sup> Wadi 2001, pp. 233–322 and especially pp. 276–277 §152. Villecourt 1925, pp. 261–320, especially p. 296.

<sup>3</sup> al-Tukhi 1991, pp. 2067–2068.

<sup>4</sup> As noticed before, Tukhi changed the text according to his dogmatic point of view, cf. Malak 1964, pp. 1–35; Zanetti 1995, pp. 65–94.

<sup>5</sup> Tukhi, 1764, pp. 142–143.

<sup>6</sup> Johnson 1991, pp. 1492–1494; 1980.

<sup>7</sup> Mina al-Baramûsî 1908, pp. 267–268.

- 3- Then ΟΥΝΟQ ΜΜΟ (the Aspasmos Adam)
- 4- The interpretation (Lobsh) of the second ode ΜΑΡΕΝΟΥΩΝ2
- 5- The interpretation (Lobsh) of the first ode ΞΕΝ ΟΥΩΩΤ
- 6- Another special tune, ΝΑΙ ΕΤΑQΖΟΤΠΟΥ ΝΧΕ ΠΙΠ̄Ν̄Α ΕΘ̄Υ
- 7- The welcoming hymn, ΠΟΥΡΟ<sup>8</sup>

The hymn could be divided into three parts:

- A- The first part: ten stanzas
- B- The second part: twenty-two stanzas
- C- The third part is a commemoration of saints. This part may vary from one manuscript to another.<sup>9</sup>

In a previous article, we argued that the second part of the text of the Doxology Adam was taken from the *Saint Sabas ordo* by the monks of the Monastery of Saint Antony when this monastery was in the hands of the Melkites. It was then translated to Coptic when the Copts took back this monastery.<sup>10</sup>

In this article we will discuss the first part of the hymn, which consists of the first ten stanzas. The text in full follows:

|   |   |
|---|---|
| ΤΕΝΟΥΩΩΤ `ΜΦΙΩΤ ΝΕΜ ΠΩΗΡΙ ΝΕΜ ΠΙΠ̄Ν̄Α<br>ΕΘ̄Υ ΧΕΡΕ ΨΕΚΚΛΗΙΣΑ ΠΗΙ `ΝΤΕ ΝΙΑΓΓΕΛΟΣ | We worship the Father and the Son and the Holy Spirit, Hail to the Church the house of the angels       |
| ΧΕΡΕ ΨΠΑΡΘΕΝΟΣ ΕΤΑΣΜΕΣ ΠΕΝΣΩΤΗΡ<br>ΧΕΡΕ ΓΑΒΡΙΗΛ ΕΤΑQΖΙΩΕΝΝΟΥQΙ ΝΑΣ              | Hail to the Virgin, who gave birth to our Saviour, Hail to Gabriel who announced to her (the good news) |
| ΧΕΡΕ ΜΙΧΑΗΛ ΠΙΑΡΧΗΑΓΓΕΛΟΣ ΧΕΡΕ ΠΙΧΟΥΤ<br>QΤΟΥ ΜΠΡΕCΒΥΤΕΡΟΣ                      | Hail to Michael, the archangel, Hail to the twenty four Presbyters                                      |
| ΧΕΡΕ ΝΙΧΕΡΟΥΒΙΜ ΧΕΡΕ ΝΙCΕΡΑΦΙΜ ΧΕΡΕ<br>ΝΙΤΑΓΜΑ ΤΗΡΟΥ `ΝΤΕΠΟΥΡΑΝΙΟΝ              | Hail to the Cherubim, Hail to the Seraphim Hail to all the ranks of heavens                             |
| ΧΕΡΕ ΙΩΑΝΝΗC ΠΙΝΙΩΨ ΜΠΡΟΔΡΟΜΟΣ ΧΕΡΕ<br>ΠΙΜΕΤCΝΑΥ ΝΑΠΟCΤΟΛΟΣ                     | Hail to John the great forerunner, Hail to the twelve apostles  |
| ΧΕΡΕ ΠΕΝΙΩΤ ΜΑΡΚΟΣ ΠΙΕΥΑΓΓΕΛΙCΤΗC<br>ΠΙΡΕQΧΩΡ ΕΒΟΛ `ΝΤΕ ΝΗΔΩΛΟΝ                 | Hail to our father Mark the Evangelist, the destroyer of the idols                                      |
| ΧΕΡΕ CΤΕΦΑΝΟΣ ΠΙΩΟΡΠ ΜΜΑΡΤΥΡΟΣ ΧΕΡΕ<br>ΓΕΩΡΓΙΟΣ ΠΙCΙΟΥ ΝΤΕ ΖΑΝΑΤΟΟΥΙ            | Hail to Stephen, the first martyr, Hail to George, the morning star                                     |
| ΧΕΡΕ ΠΧΟΡΟΣ ΤΗΡQ `ΝΤΕ ΝΙΜΑΡΤΥΡΟΣ ΧΕΡΕ<br>ΑΒΒΑ ΑΝΤΩΝΙ ΝΕΜ ΠΙΩΟΜΤ ΜΑΚΑΡΙΟΣ        | Hail to the whole choir, of the martyrs, Hail to Abba Antony and the three Macarii                      |
| ΧΕΡΕ ΠΧΟΡΟΣ ΤΗΡQ ΝΤΕ ΝΙCΤΑΥΡΟΦΟΣ ΧΕΡΕ<br>ΝΗΕΘ̄Υ ΤΗΡΟΥ ΕΤΑQΡΑΝΑQ `ΜΠΘ̄C          | Hail to the whole choir, of the cross-bearers, Hail to all the saints, who have pleased the Lord        |
| ΖΙΤΕΝ ΝΟΥΕΥΧΗ ΠΧ̄C ΠΕΝΟΥΡΟ ΑΡΙΟΥΝΑΙ<br>ΝΕΜΑΝ ΞΕΝ ΤΕΚΜΕΤΟΥΡΟ                     | Through their prayers, O Christ our king, have mercy upon us in Your Kingdom.                           |

<sup>8</sup> Many thanks to my friend Abadir Girgis, cantor of the church of Melbourne, for his help.

<sup>9</sup> Epiphanius al-Makary 2011, pp. 9–16.

<sup>10</sup> Youssef 1998, pp. 91–93.

## Hagiographical Commentary

The stanza starts by praising the Holy Trinity.

The keep (*qasr*) of the monastery of Saint Macarius is by far the most interesting of its kind, because of its many chapels and churches:

- 1- The Chapel of the **Virgin Mary** is on the first storey
- 2- The church of **Michael** the archangel is the northernmost
- 3- The church of **St Antony** is situated south of the church of Michael<sup>11</sup>
- 4- We may notice the absence of the seven Archangels while **the Cherubim** is mentioned. It is known that the Cherubim was the patron saint of Saint Macarius the Great:

ϕ† `ΝΤΕ ΠΩΟΥ ΑΓΩΩΠΙ ΝΕΜ ΠΙΘΜΗ ΠΙΝΙΩ† ΑΒΒΑ ΑΒΒΑ ΜΑΚΑΡΙ ΠΙΠ̄Ν̄ΑΤΟΦΟΡC  
ΑΘΩΩ ΓΑΡ ΕΡΟQ ΝΟΥΧΟΜ ΕCΟΥΑΒ ΕΤΕ ΝΙΧΕΡΟΥΒΙΜ

The God of Glory was with the just one, the great Abba Makari, the Spirit-Bearer  
For He assigned unto him a holy Power even the Cherubim

ΠΙΧΕΡΟΥΒΙΜ ΕΘΜΗΝ ΕΡΟΚ ΠΑḐC `ΝΙΩΤ ΑΒΒΑ ΜΑΚΑΡΙ ΨΑΝΤΕΦΕΝΚ ΕΝΑΙ ΨΑΦΕΥ

The Cherubim who abode with thee, my Lord Father, Abba Makari, until he brought thee unto these deserts.<sup>12</sup>

- 5- **Saint John the Baptist and Saint Mark** are especially venerated in the monastery of Saint Macarius, as part of their relics are preserved there. We quote the note of the former abbot of the monastery:

The sanctuary of Saint John the Baptist was so named because it was said to contain the body of that saint, together with that of the prophet Elijah, which had been transported from Palestine to Alexandria in the fourth century during the patriarchate of Athanasius I. In the tenth century John's body was removed to the monastery, where the remains and those of some bishops and patriarchs were discovered in April 1976 while the church building was being restored. Hitherto known as the Sanctuary of Saint Mark on account of the presumption that the head of the evangelist was buried there, it since has been alternately identified as the sanctuary of Saint Mark and of Saint John the Baptist.<sup>13</sup>

- 6- In the main church in the sanctuary of Benjamin we find that the western wall was originally decorated with a scene of the Ascension, with Christ between two angels flanked by a series of large figures representing the Apostles and Evangelists. Below,<sup>14</sup> in the other direction, a faint scene of the two equestrian saints Claudius and Menas can be traced. The eastern, northern and southern walls are occupied by a series of figures sitting on jewelled thrones and holding small vessels. They represent the twenty-four elders of the Apocalypse.
- 7- The veneration of the three Macarii and the disciples<sup>15</sup> is essentially celebrated in the desert of Scetis.

<sup>11</sup> Meinardus 2002, pp. 101–102.

<sup>12</sup> Evelyn-White 1926, pp. 121–122.

<sup>13</sup> Matta al-Miskin 1991, pp. 748–756.

<sup>14</sup> Gabra 2002, pp. 58–60.

<sup>15</sup> Youssef 1994, pp. 61–67.

It is clear that all the saints invoked in this hymn are commemorated in the Monastery of Saint Macarius.

The Monastery of Saint Macarius became the main provider of the patriarchs from Chael the First, the 46th patriarch (743–767), to Macarius the Second, the 69th (1102–1128), nearly without interruption. We may expect that during this period the first part of the hymn was introduced. The author, as in the case of most Coptic hymns, is anonymous.

## Conclusion

As we demonstrated previously, the monks of Saint Macarius composed another hymn praising their own saints.<sup>16</sup> We can conclude that this part of the doxology was added by the monks of the Saint Macarius monastery after they had translated the second part, produced by the monks of Saint Antony.

It seems that this addition was written between the eighth and twelfth centuries, when the Monastery of Saint Macarius reached his peak.

This paper proves once more the importance of interdisciplinary approaches between history, art history and liturgical studies.

## Bibliography

Abd al-Masih, Yassa

1938 "Doxologies in the Coptic Church. The use of Doxologies," *Bulletin de la Société d'Archéologie Copte* 4: 97–113.

1939 "Doxologies in the Coptic Church. Unedited Sa'idic doxologies volumes XIII and XIV of the Pierpont Morgan Collection of Coptic MSS," *Bulletin de la Société d'Archéologie Copte* 5: 175–191.

1940 "Doxologies in the Coptic Church. Edited Bohairic doxologies," *Bulletin de la Société d'Archéologie Copte* 6: 19–76.

1942 "Doxologies in the Coptic Church. Unedited Bohairic doxologies. I (Tût - Kyahk)," *Bulletin de la Société d'Archéologie Copte* 8: 31–61.

1945 "Doxologies in the Coptic Church. Unedited Bohairic doxologies. II (Túbah - An- Nâsi)," *Bulletin de la Société d'Archéologie Copte* 11: 95–158.

Epiphanius al-Makary

2011 "The morning doxology," *Bulletin de la Société d'Archéologie Copte* 50: 9–16.

Evelyn-White, H. G.

1926 *The Monasteries of the Wadî 'n Natrûn, Part 1: New Coptic Texts From The Monastery of Saint Macarius*. New York: Metropolitan Museum of Art, Egyptian Expedition.

Gabra, G.

2002 *Coptic Monasteries: Egypt's Monastic Art and Architecture*. Cairo: American University in Cairo Press.

<sup>16</sup> Youssef 2002, pp. 71–76.

Johnson, D.

1991 "Macarius of Tkow, Saint," in *Coptic Encyclopedia*, Vol. 5, edited by A. S. Atiya, pp. 1492–1494. New York: MacMillan.

1980 (trans.) *A Panegyric on Macarius, Bishop of Tkôw, Attributed to Dioscorus of Alexandria* (Corpus Scriptorum Christianorum Orientalium, 416). Louvain: Peeters.

Malak, H.

1964 "Les Livres Liturgiques de l'Eglise Copte," in *Mélanges Eugène Tisserant*, III (Studi e Testi, 233), pp. 1–35. Vatican: Biblioteca apostolica vaticana.

Matta al-Miskin

1991 "Dayr Anba Maqar," in *Coptic Encyclopedia*, Vol. 3, edited by A. S. Atiya, pp. 748–756. New York: MacMillan

Meinardus, O. F. A.

2002 *Monks and Monasteries of the Egyptian Deserts*. Cairo: American University in Cairo Press.

Mina al-Baramûsî

1908 **†ΨΑΛΜΟΥΤΙΑ ἸΝΤΡΟΜΠΙ ΕΘΟΥΑΒ** [The Psalmody of the Year]. Alexandria.

al-Tukhi, R.

1991 "Rufâ'il al-Tukhi," in *Coptic Encyclopedia*, Vol. 7, edited by A. S. Atiya, pp. 2067–2068. New York: MacMillan.

Tukhi, R.

1964 **ΠΙΧΩΜ ΝΤΕ ΝΙΘΕΟΤΟΚΙΑ ΝΕΜ ΚΑΤΑ ΤΑΞΙC ΝΤΕ ΠΙΑΒΟΤ ΝΧΟΙΑΚ** (*Kitab al-Theyutukiyyat wa-Tartib shahr Kiyahk*) [Theotokia and Ordo for the month of Kiyahk]. Rome.

Villecourt, L.

1925 "Les observances liturgiques de l'Église Copte," *Le Muséon* 38: 261–320.

Wadi, A.

2001 "Abû al-Barakât Ibn Kabar, Misbah al-Zulmah (cap.18: Il digiuno e la settimana santa)," *Studia Orientalia Christiana Collectanea* 34: 233–322.

Youssef, Y. N.

1994 "Quelques titres des congrégations des moines coptes," *Göttinger Miszellen* 139: 61–67.

1998 "Note sur la traduction d'une Doxologie Copte," *Göttingen Mizsellen* 166: 91–93.

2002 "Contribution of a Coptic liturgical text to the history of the Egyptian monasticism," *Bulletin de la Société d'Archéologie Copte* 41: 71–76.

Zanetti, U.

1995 "Bohairic liturgical manuscripts," *Orientalia Christitiana Periodica* 60: 65–94.

Youhanna Nessim YOUSSEF  
The University of Melbourne, Australia  
E-mail: ynyoussef@hotmail.com



## BOOK REVIEWS

Megan A. Perry (ed.). Foreword by Clark Spencer Larsen. *Bioarchaeology and Behavior: The People of the Ancient Near East*. Gainesville: University Press of Florida, 2012. Pp. xiv + 211.

It is curious that human skeletal evidence gets little reference in the vast scholarship on Biblical and Classical Archaeology. This volume, edited by Megan A. Perry, is an attempt to integrate the contextual research of bioarchaeologists with the largely “text-based” research of Classical archaeologists of the Near East and eastern Mediterranean. A foreword by Larsen and the introduction to the volume by Perry and Buikstra make it clear that bioarchaeological research on human skeletal remains has been thriving in this region since the 1930s, and has resulted in several seminal publications by J. Lawrence Angel. Buikstra’s tabulation reveals that Angel’s works are the top 10 most frequently cited within physical anthropology journals and books from 1976 to 2005. Interestingly, however, they are rarely cited in archaeological publications. This edited volume showcases the latest research by bioarchaeologists in the region in an attempt to foster a collaborative and holistic approach to understanding past human behaviour in this singularly significant area of the world, where the transition from nomadism to sedentism is first observed.

The contributions to the volume come from papers presented at the 2006–2008 annual meetings of the American School of Oriental Research. As such, there is breadth to the selection of papers included. They cover the Natufian period of the Near East (13,000–10,300 BP), the late Neolithic of southern Anatolia (5800–5450 BC), the Bronze Age of Jordan (3150–2300 BC), the early Christian era of Cyprus (fifth to seventh centuries AD) and the medieval period of Cyprus (thirteenth century AD). There is also range in the topics covered.

The first four chapters use contextual information about skeletal remains to discuss behavioural practices relating to death. The first chapter, by Gauld, Oliver, Kansa and Carter, describes a large single-event burial pit at the late Neolithic site of Domuztepe in Southeastern Anatolia, packed with human and animal remains. Evidence of blunt force trauma, pot polish from cooking and human tooth marks suggest that these were the remains of a predatory violation ritual that involved cannibalism and empowerment feasting on the vanquished. This interpretation of the forcible destruction of one group to eliminate threat offers significant new insight into ritual and burial practices in this time period; however, without any accompanying cultural context or archaeological evidence for conflict, the hypothesis remains intriguing, but not convincing. The next two chapters similarly offer new interpretations of burial practices. Torres-Rouff and Pestle review perinatal infant burials found in a trench adjacent to the foundations of a large neo-Babylonian temple complex in Kish, Iraq. It was previously proposed that these were female infants sacrificed to appease the temple’s deities, but Torres-Rouff and Pestle draw on Neo-Babylonian writings and the attributes of deities to provide a refreshingly new perspective on the social significance of these burials. The chapters by Fox, Moutafi, Prevedorou and Pilides, as well as Baker and Papalexandrou, describe burials associated with churches in early Christian and medieval periods in Cyprus. Taking a detailed contextual approach, Fox *et al.* challenge conventional views that all Christian graves are oriented in the West-East direction, with bodies supine and hands placed over the chest or abdomen. That is not universally true in early Christian Cyprus, nor is it the case that all burials occur outside the church complex. They also report that there is variability in the number of individuals buried per tomb and in the types of graves found. Baker and Papalexandrou compare burials at two basilicas dating from the medieval period at Polis, Cyprus. Their paper is my personal favourite because of their well-rounded approach, which takes into consideration the social status of individuals, hypotheses for the presence of commingled remains in the burials, and evidence for everyday life, including activity patterns, illness and health. Although much of their work is still in the formative stage they show how bioarchaeological investigations can really bring to life the people of the past.

The next four chapters focus on chemical and morphological analyses to understand aspects of daily life, such as breastfeeding, weaning, growth, diet, activity levels and migration patterns. Skeletal material from a Byzantine copper mining camp in Jordan provides Perry, Coleman, Dettman and al-Shiyab an opportunity to compare oxygen and strontium isotopic ratios with lead and copper levels to determine whether there were migrants in the community and whether toxicity levels were higher in the people working in the mines than in people living in the area. Their preliminary results are slightly counterintuitive, but certainly worth further study. Another chapter, by Gregoricka and Sheridan, presents carbon and nitrogen isotopic ratios to determine the proportion of plant food and animal protein in the diets of infants being breastfed or weaned compared with the rest of the population buried in a crypt in a monastery in Jerusalem in the early Christian period. Their findings fit with recommendations of modern physicians with regards to the timing for breastfeeding and weaning, but they offer a different view of monastic life from that portrayed in existing texts. Alrousan and Pérez- Pérez also study the proportion of animal protein versus vegetable matter, this time in the diet of the Natufian people of Israel. Their study is innovative and non-destructive, and focuses on microwear patterns on the outer surfaces of cheek teeth. Their results have interesting implications for the lifestyle of the people at the sites they compared. The final chapter by Ullinger, Sheridan and Ortner presents an understanding of daily activity patterns from features of lower limb bones at two Bronze Age sites in Jordan. The Bronze Age occupation period coincides with the transition from pastoral nomadism to permanent settlement within a walled town. Their results show distinct differences in limb usage from the nomadic to the sedentary lifestyle, suggestive of specialisation of tasks in the later period.

The varied repertoire of bioarchaeological studies in this volume gives a distinct feeling of a taster's smorgasbord. Most of the studies are preliminary and hint at more detailed studies to follow. The editorial work is impeccable and there are barely any editorial or typological errors. Conspicuously absent, however, are the acknowledgements. Many chapters do not have an acknowledgement section and the editor offers no overall acknowledgements. A read through the available acknowledgements and the tokenistic nature of many statistical analyses makes it clear that the chapters did not go through a process of peer review. This added to my sense of incompleteness. The book is intended to bring the work of bioarchaeologists to the attention of other archaeologists working in the ancient Near East and eastern Mediterranean. This is definitely a worthwhile endeavour, and I endorse this book to Biblical, Classical and Near Eastern archaeologists. Given the range of time periods and topics covered, I doubt that this book will land on the bookshelves of all scholars and students in this research area, but I think that a few copies should be purchased by all libraries, so that students and scholars can read the chapters of relevant interest time and again.

Varsha PILBROW  
University of Melbourne  
E-mail: vpilbrow@unimelb.edu.au

Beat Näf, *Testimonia Alt-Paphos*. Ausgrabungen in Alt-Paphos auf Cypern, Bd. 8. Darmstadt-Mainz: Verlag Philipp von Zabern, 2013. Pp. xviii + 116. € 49.

A new volume in the series of publications of Alt-Paphos in Cyprus is always welcome. The site (Palai-paphos, modern Kouklia) was the home of the cult of Aphrodite, whose birth from the waves was believed to have occurred just a little down the coast. There is evidence of activity at the site from the end of the Middle Bronze Age, and evidence of continuity of cult from the twelfth century onwards. The site's high period was of course in the classical era. Even after the formation of Nea Paphos beside the best harbour in the region towards the end of the fourth century, the Ptolemies' adoption of that city as the capital of Cyprus, and the apparent construction of a temple to Aphrodite there, Palaipaphos retained its importance as a traditional centre of cult and the home of the Paphian goddess.

Christianity took an early hold in this part of the world — one remembers that Paul and Barnabas converted the Roman governor Sergius Paulus towards the middle of the first century. By the time the

capital of Cyprus was shifted to Salamis in the east of the island in the fourth century AD, Palaipaphos had largely disappeared from the literary sources. It had become irrelevant. The site and the area in general took on a fresh importance in the twelfth to fifteenth centuries AD as a consequence of the development of the sugar industry in western Cyprus, and for those with even the slightest interest in industrial archaeology, this phase is a fascinating one and important for much of western Europe. But as sugar production in turn died out (not least following the exploitation of the West Indies for the purpose), so did the site.

Although there have been intermittent excavations at Palaipaphos since the nineteenth century, for example by Cesnola, a team led by Franz Georg Maier has been working there consistently since 1966, with a steady stream of reports in *Archäologischer Anzeiger* from 1967 until 1998. They have enjoyed ongoing support from the Deutsches Archäologisches Institut. The series *Ausgrabungen in Alt-Paphos auf Cypern* began in 1977, with a first publication of material from what was a highlight of their earlier excavations: the Persian siege-ramp of 498 BC.<sup>1</sup> Since then there has also been important work on the medieval material, and especially the glazed pottery, under the guidance of Maier's colleague, Marie-Louise von Wartburg.<sup>2</sup>

This volume by Maier and von Wartburg's colleague Beat Näf sets the archaeological evidence in a broader historical context, with a collection of ancient, medieval and later testimonia. The author is generous in his acknowledgement of other collections that refer to Cyprus in general, such as Hadjiioannou (8 vols, 1971–1992) or the Wallace and Orphanides *Sources for the History of Cyprus* (14 vols, 1990–2007).<sup>3</sup> The latter, however, was a rather more popular, less focussed if handy treatment with English translations, while the former was aimed primarily at Greek sources for Cyprus in general. Näf also notes that a number of other more specialised collections, such as those for Amathous, Kition and Salamis, were instructive in terms of approach. He is unduly modest.

Näf begins with the ancient world and, within that, a compact survey of geographical sources. The culprits are well known, although in the context of the Peutinger Table (for which, like others, he opts for an archetype of about AD 250), it is perhaps worth emphasising how it clearly constructs things so as to make Paphos the point of arrival in the island from Greece and the West. Näf quite properly quotes Weber's facsimile edition, but it is worth mentioning that the table is now readily available on the web,<sup>4</sup> and that there is now excellent discussion in Richard Talbert's *Rome's World: The Peutinger Map Reconsidered*.<sup>5</sup> Geography and mapping is a lively and expanding field these days. I saw no mention of the journal *Geographia Antiqua* for example, now in its 22nd year of publication. One may add, though Näf could not have known it, Walter Scheidel's work, as exemplified in his article "The Shape of the Roman World" on the Princeton/Stanford website *Working Papers in Classics*,<sup>6</sup> together with "ORBIS: The Stanford Geospatial Network Model of the Roman World" (<http://orbis.stanford.edu>). They are important for their attempt to understand the Romans' conceptualisation of their world.

Just two pages on, mentions of earthquakes follow. The latest Näf includes is that of AD 77. There were not a few others in antiquity, not least that of AD 365 or thereabouts which devastated much of the eastern Mediterranean, including Paphos where it marked a major horizon. The theatre of Nea Paphos was destroyed and its remains became a source of building materials for a Christian basilica — a symbolic as well as practical event.<sup>7</sup> There may be no direct mention of Palaipaphos but the physical, economic and social effects of the event must have been considerable throughout the region.

<sup>1</sup> For the siege-ramp, see also Maier 2008.

<sup>2</sup> There is a good overview by Maier in the introduction to Wieland and Frey-Asche 2011, as well as in his *Guide to Palaipaphos* (2004).

<sup>3</sup> Hadjiioannou 1971–1991; Wallace and Orphanides 1990–2007.

<sup>4</sup> For example, [http://www.hs-augsburg.de/~harsch/Chronologia/Lspost03/Tabula/tab\\_peoo.html](http://www.hs-augsburg.de/~harsch/Chronologia/Lspost03/Tabula/tab_peoo.html); <http://peutinger.atlantides.org/>

<sup>5</sup> Talbert 2010.

<sup>6</sup> Scheidel 2013. The paper may be accessed via <http://www.princeton.edu/~pswpc/papers/authorMZ/scheidel/scheidel.html>.

<sup>7</sup> Note *inter alios* Ammianus Marcellinus 26.10, 15–19, and more recently Jacques and Bousquet 1984, pp. 183–198; G. Baudy 1992, 47–82; and the valuable discussion in Waldherr 1977.

Chapter 2 is concerned with documented individuals and with records of myth and cult involving the sanctuary. Chapter 3 follows, with ancient literary testimonia in chronological order. This is the most thorough part of the book and it will stand the test of time as the definitive resource. In addition to his care in teasing out the details, Näf contributes a compact, valuable overview. Inevitably, many of the sources speak of Paphos in general, without separating city from sanctuary, as in Ammianus' statement that Paphos was *Veneris templo insignis*.

Such references were picked up by medieval writers (Chapter 4). Typically they were pilgrims making their way through to the Holy Land who stopped off for fresh water and supplies, often identifying a site by the harbour as the temple while almost in the same breath mentioning the devastating effects of earthquakes. They knew their ancient sources and drew on them in creating their pictures of the current situation, thus giving them validity. Before them, the same sources were already part of the Venerable Bede's knowledge, and Willibald, the first attested English pilgrim, passed through in AD 724. By then, one can demonstrate archaeologically that Paphos had shrunk to a mere village through economic hardship, plague, and of course the Arab raids of the two previous centuries. Näf points out that after the seventh century, the written sources make no distinction between Nea Paphos and Palaipaphos.

There are of course many cases where the evidence is simply not good enough for a clear decision on whether an item should be included. One example is that of Eiríkr (Erik the Good) who died somewhere in the Paphos area on 10 July 1103.<sup>8</sup> The king was on his way to Jerusalem after a successful visit to Constantinople.<sup>9</sup> There were also significant earthquakes in the thirteenth and fourteenth centuries, that, combined with the expulsion of the Crusaders from the Holy Land in 1291, helped terminate a burgeoning trade with the Levant.

From the early fifteenth century, written references become more frequent again and Näf gives us a good selection, at the same time being careful to quote useful secondary sources. One could write a book on the attitudes represented.

The final chapter, 5, contains material from the eighteenth century onwards, beginning with Richard Pococke and moving through to the familiar names of Cesnola, Enlart, Hogarth, Ohnefalsch-Richter and the like, ending with Myres and Markides' observation of the incoming sea a little down the coast and the way it can give the impression, as it crashes on the shore, of a figure rising from the water "and spreading long hair and dripping arms." I would add that the water often seems milky too.

## Bibliography

- Baudy, G.  
1992 "Die Wiederkehr des Typhon. Katastrophen-Topoi in nachjulianischer Rhetorik und Annalistik: Zu literarischen Reflexen des 21. Juli 365 n.Chr.," *Jahrbuch für Antike und Christentum* 35: 47–82.
- Gade, K. E. and Clunies Ross, M.  
2009 *Skaldic Poetry of the Scandinavian Middle Ages*, vol. 2, pt. 1. Turnhout: Brepols.
- Hadjiioannou, K.  
1971–1992 *Archaia Kypros eis tas Hellenikas Pegas*, 8 vols. Cyprus: Leucosia.
- Jacques, F. and Bousquet, B.  
1984 "Le cataclysme du 21 juillet 365: Phénomène régional ou catastrophe cosmique?," in *Tremblements de Terre, Histoire et Archéologie*, edited by B. Helly and A. Pollino, pp. 183–198. Valbonne: Association pour la promotion et la diffusion des connaissances archéologiques.

<sup>8</sup> The Danes have now erected a monument to him at the Chrysopolitissa basilica in Nea Paphos, but there is no historical reason for the choice of such a location.

<sup>9</sup> Gade and Clunies Ross 2009, pp. 458–459 with refs; see also Riis 2000, pp. 144–154.

- Maier, F. G.  
2008 *Nordost-Tor und persische Belagerungsrampe in Alt-Paphos: III. Grabungsbefund und Baugeschichte* (Ausgrabungen in Alt-Paphos auf Cypern, Bd. 6). Mainz: Von Zabern.
- Maier, F. G., Chatzēsavvas, S. and Wartburg, M.-L.  
2004 *Guide to Palaipaphos (Kouklia)*. Nicosia: Bank of Cyprus Cultural Foundation.
- Riis, P. J.  
2000 "Where was Erik the Good buried?," *Mediaeval Scandinavia* 13: 144–154.
- Scheidel, W.  
2013, April "The shape of the western world." <http://www.princeton.edu/~pswpc/papers/authorMZ/scheidel/scheidel.html>.
- Talbert, R. J. A.  
2010 *Rome's World: The Peutinger Map Reconsidered*. Cambridge: Cambridge University Press.
- Waldherr, G. H.  
1997 *Erdbeben: Das aussergewoehnliche Normale: Zur Rezeption seismischer Aktivitaeten in literarischen Quellen vom 4. Jahrhundert v. Chr. bis zum 4. Jahrhundert n. Chr.* Stuttgart.
- Wieland, D. L and Frey-Asche, L  
2011 *Weihgeschenke aus dem Heiligtum der Aphrodite in Alt-Paphos: Terrakotten, Skulpturen und andere figürliche Kleinvotive*. Darmstadt: Verlag Philipp Von Zabern.
- Wallace, P. W. and Orphanides, A. G.  
1990–2007 *Sources for the History of Cyprus*, 14 vols. Albany, N.Y.: Institute of Cypriot Studies, University at Albany, State University of New York; Nicosia: Cyprus College.

J. R. GREEN  
University of Sydney  
E-mail: richard.green@sydney.edu.au